

Route Strategy Initial Overview Report

# Felixstowe To Midlands

May 2023





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# The routes

## Routes

- London to Scotland West (North)
- London to Scotland East (North)
- South Pennines (East)
- South Pennines (West)
- North Pennines
- London to Leeds
- Midlands and Gloucestershire to Wales
- North and East Midlands
- South Midlands
- London to Scotland West (South)
- London to Scotland East (South)
- East of England
- Felixstowe to Midlands
- Kent Corridors to M25
- Solent to Midlands
- London Orbital and M23
- South Coast Central
- South West Peninsula
- Birmingham to Exeter
- London to Wales

## Sub-national Transport Bodies

- England's Economic Heartland
- Midlands Connect
- South West Peninsula
- Transport East
- Transport for the North
- Transport for the South East
- Western Gateway

There are 17 routes relating to route strategies across our strategic road network (SRN). To take better account of our customers' end-to-end journeys, we have split some of the longer routes into sub-strategies across 20 reports.

PENZANCE

PLYMOUTH



# Executive summary

## Introduction

Our strategic road network (SRN) is the backbone of the country. Over 4,500 miles of motorways and major A-roads connect people, build communities, create opportunities and help the nation thrive. To plan for the future, we take a long-term view of our network and the trends that could impact transport, road travel, and personal and commercial mobility. Route strategies are at the centre of this dynamic future planning of our network, informing how we operate, maintain and renew our network. This report is the Initial overview report for the Felixstowe to Midlands route and summarises the outcomes of the route strategy. The report builds on the first two rounds of route strategies in 2015 and 2017. It aims to be more forward looking, integrated and collaborative, while being dynamic enough to respond to the future needs of our customers and neighbours.

In this report, we detail the route context, current constraints on the route, and opportunities for improved connections with local roads and rail links. We set out intelligence-led route objectives aligned with the Department for Transport's (DfT's) six strategic objectives. These objectives aim to ensure the route can serve its function, while mitigating the identified constraints and challenges. They conclude with locations for further consideration to achieve the route objectives. The route objectives and locations for further consideration will be presented to the Department for Transport to inform future decision-making about investment planning through the Road investment strategy (RIS). It should be recognised that not all aspirations outlined in this report can be funded or delivered.

### DFT'S SIX STRATEGIC OBJECTIVES FOR THE STRATEGIC ROAD NETWORK

-  Improving safety for all
-  Network performance
-  Improved environmental outcomes
-  Growing the economy
-  Managing and planning the SRN for the future
-  A technology-enabled network

For clarity, this document does not:

- Identify committed schemes for delivery as part of future RIS periods. This will be part of the wider RIS setting process
- Commit to the delivery of local plans or economic growth developments mentioned
- Guarantee funding for any locations identified for further studying to understand the challenges and issues in more detail
- Preclude the inclusion of other locations for consideration in the light of other evidence or imperatives

## Customers and neighbours

Engagement with our customers and neighbours has been central to developing our route strategies. We have already gathered a wealth of evidence from the previous rounds of route strategies and through our ongoing monitoring of road condition and performance.

Our performance is monitored through the National Highways' Performance Framework. This Performance Framework was established at the start of the second road period (2020 – 2025) and sets out National Highways' commitments to 2025. It is outlined in the *RIS2 Delivery plan (2020 - 2025)*<sup>1</sup>. We will continue this monitoring approach into the third road period (2025 – 2030).

To add to this existing evidence, we carried out a detailed engagement programme for this round of route strategies to understand the current and future needs of those using and living alongside the SRN.

## The route

The Felixstowe to Midlands Route is approximately 221 miles in length and contains the A14, A421, A428 and A45 corridors. The route also includes the A141 and the A1307 short stretches of road to the west of Huntingdon. The A141 and A1307 are currently planned to be de-trunked and handed over to Cambridgeshire County Council as part of the wider A14 Cambridge to Huntingdon Improvement Scheme Development Consent Order (2016).

This route strategy report can be read alongside other interacting route strategy reports, including:

- London to Leeds
- London to Scotland East (South)
- South Midlands
- East of England

## Challenges and issues

We have identified challenges and issues of those using the route and living alongside it. These correspond to the DfT's six strategic objectives, which are the strategic objectives for RIS3. They were agreed by National Highways and the DfT, and are set out in the *RIS3 Planning ahead*<sup>2</sup> document in December 2021.

### Improving safety for all

- Concentration of collisions on the remaining single carriageway sections of the route, such as the A428 between Caxton Gibbet and St Neots, and the A45 between Thrapston and Rushden
- Concerns over junctions on the A14 between Ellington and Thrapston raised by communities

### Network performance

- Local roads, including the Major Road Network (MRN), that interface with the Strategic Road Network (SRN) can suffer from the impact of the lack of SRN alternative routes, and capacity and reliability issues.
- Diversion routes are often less suitable for high volumes of freight or general traffic, which can result in secondary impacts, such as increased congestion, reduced air quality and increased noise.
- Limited technology provision makes it more difficult to manage disruptive incidents and communicate information to users

<sup>1</sup> Highways England *Delivery Plan 2020 – 2025*, <https://nationalhighways.co.uk/media/vh0byhfl/5-year-delivery-plan-2020-2025-final.pdf>

<sup>2</sup> Department for Transport December 2021, *Planning ahead for the Strategic Road Network: Developing the third Road Investment Strategy*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf)

**Improved environmental outcomes**

- There are several AONBs and places with environment designations and cultural heritage near the route
- Traffic related environmental issues including air quality and noise impacts which may be more likely for nearby receptors living directly on the route, such as Bury St Edmunds, Cambridge and Northampton
- Greenhouse gas emissions from car and HGV traffic
- Exposure to severe weather events on the A14 at Cambridge and the A45 at Rushden

**Growing the economy**

- Connectivity between the port of Felixstowe and the M1 and M6 is vital to the national economy
- Journey time variability and unpredictability are impacting network performance which is especially important to international freight hauliers
- Communities on the route in category 1, priority levelling up areas need to benefit from investment in the route to allow new employment development to be successfully integrated
- Considerable development expected along the route in coming years

**Managing and planning the SRN for the future**

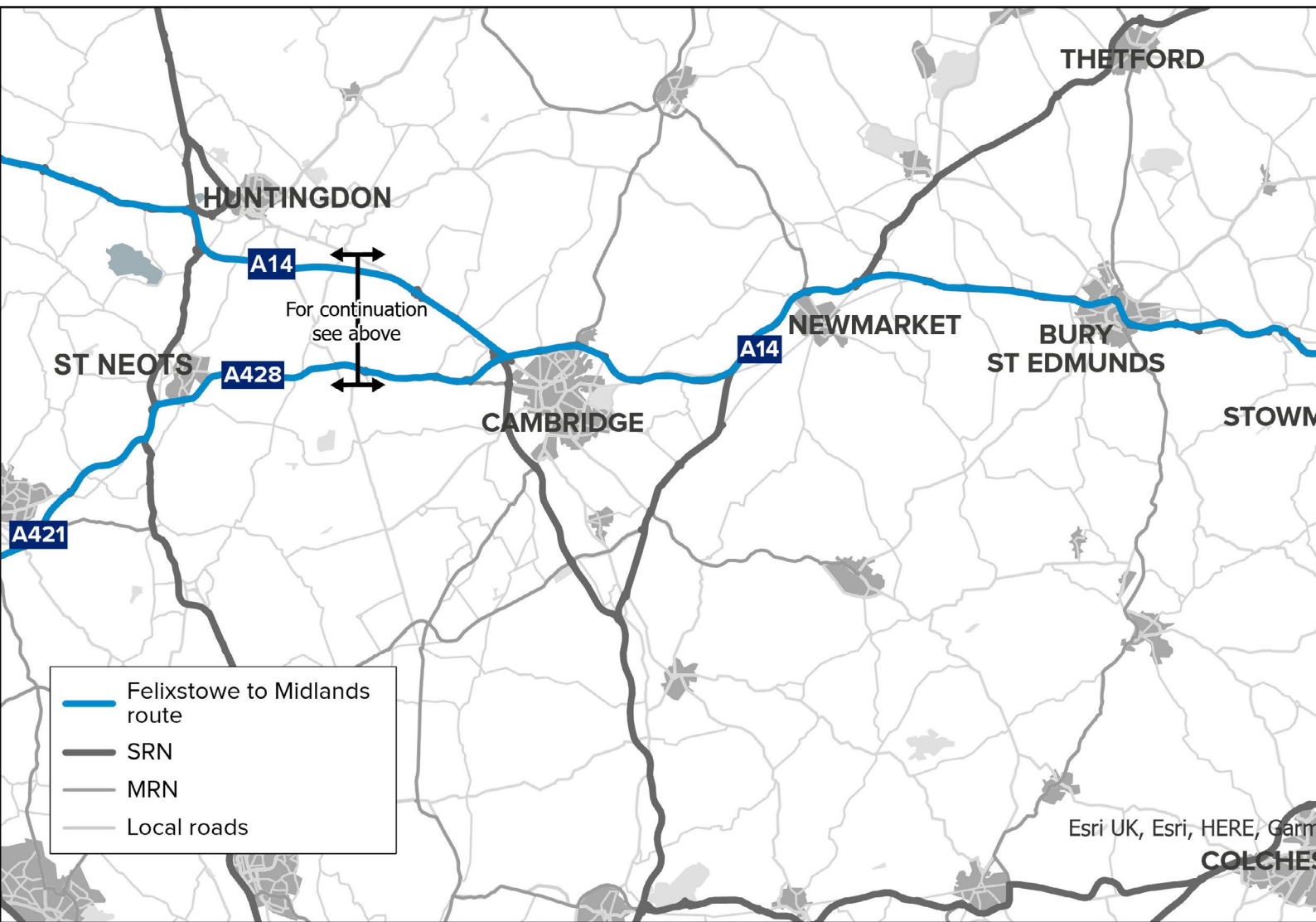
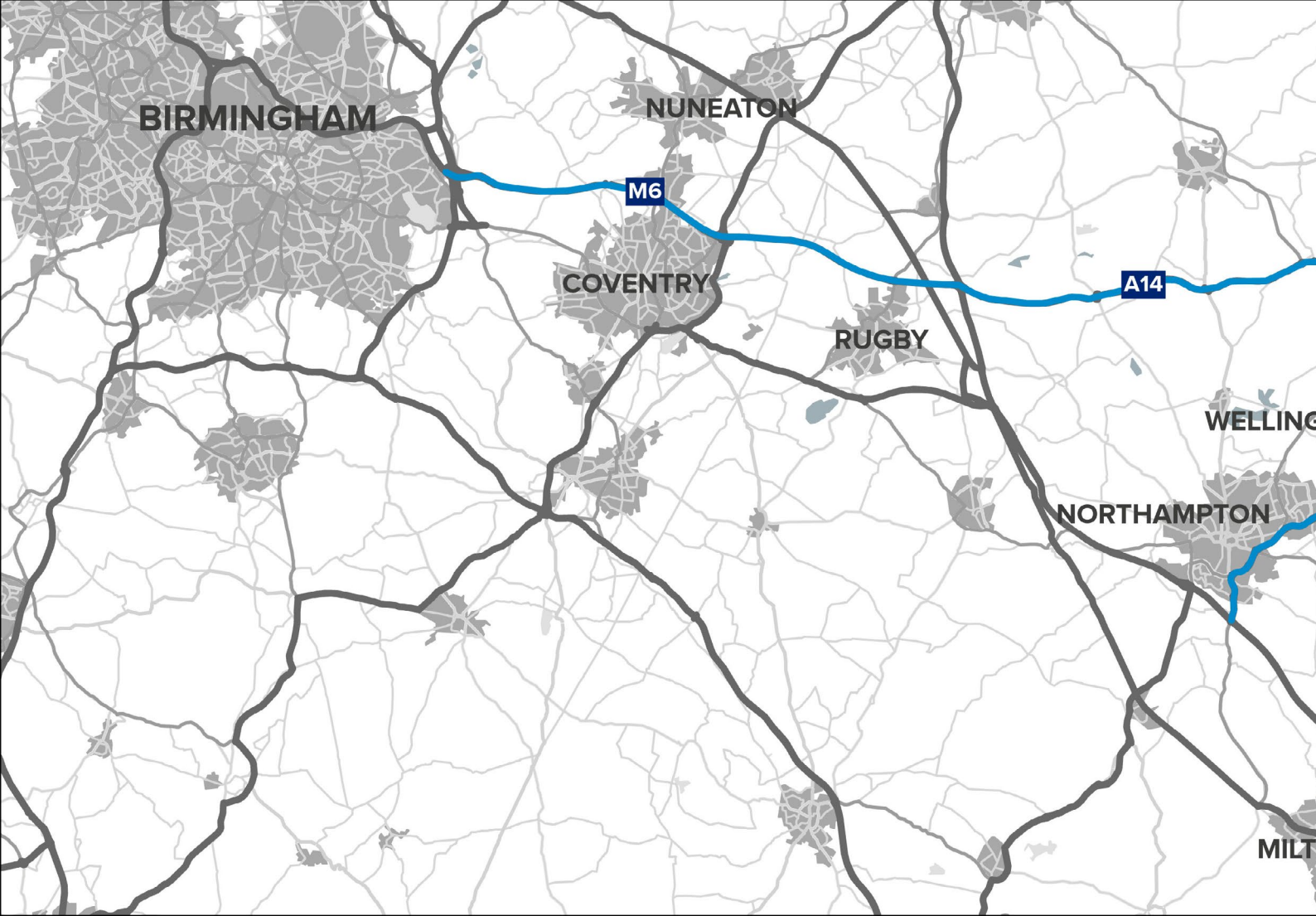
- Contributing toward the national target of 96.2% or more of carriageway being in good condition
- Maintaining the good condition of the SRN's geotechnical assets
- Ensuring that drainage assets are maintained so that their good structural and service conditions can be upheld

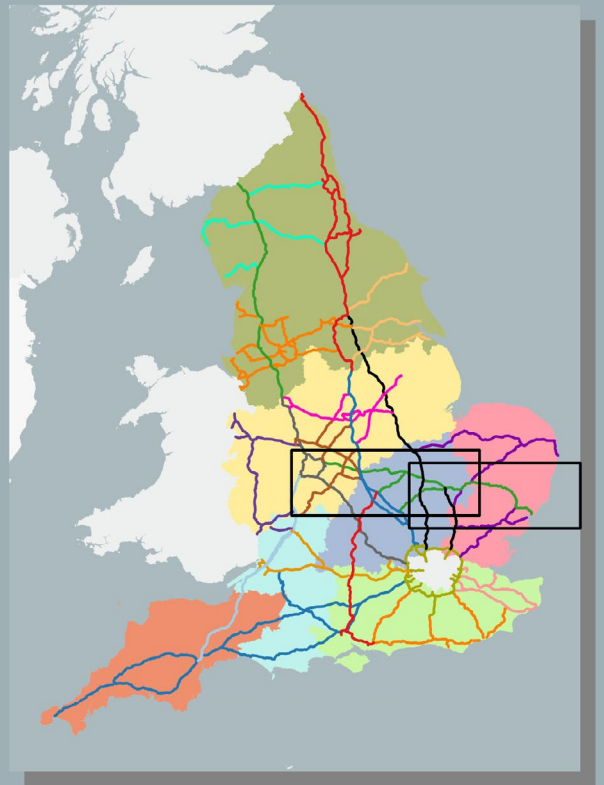
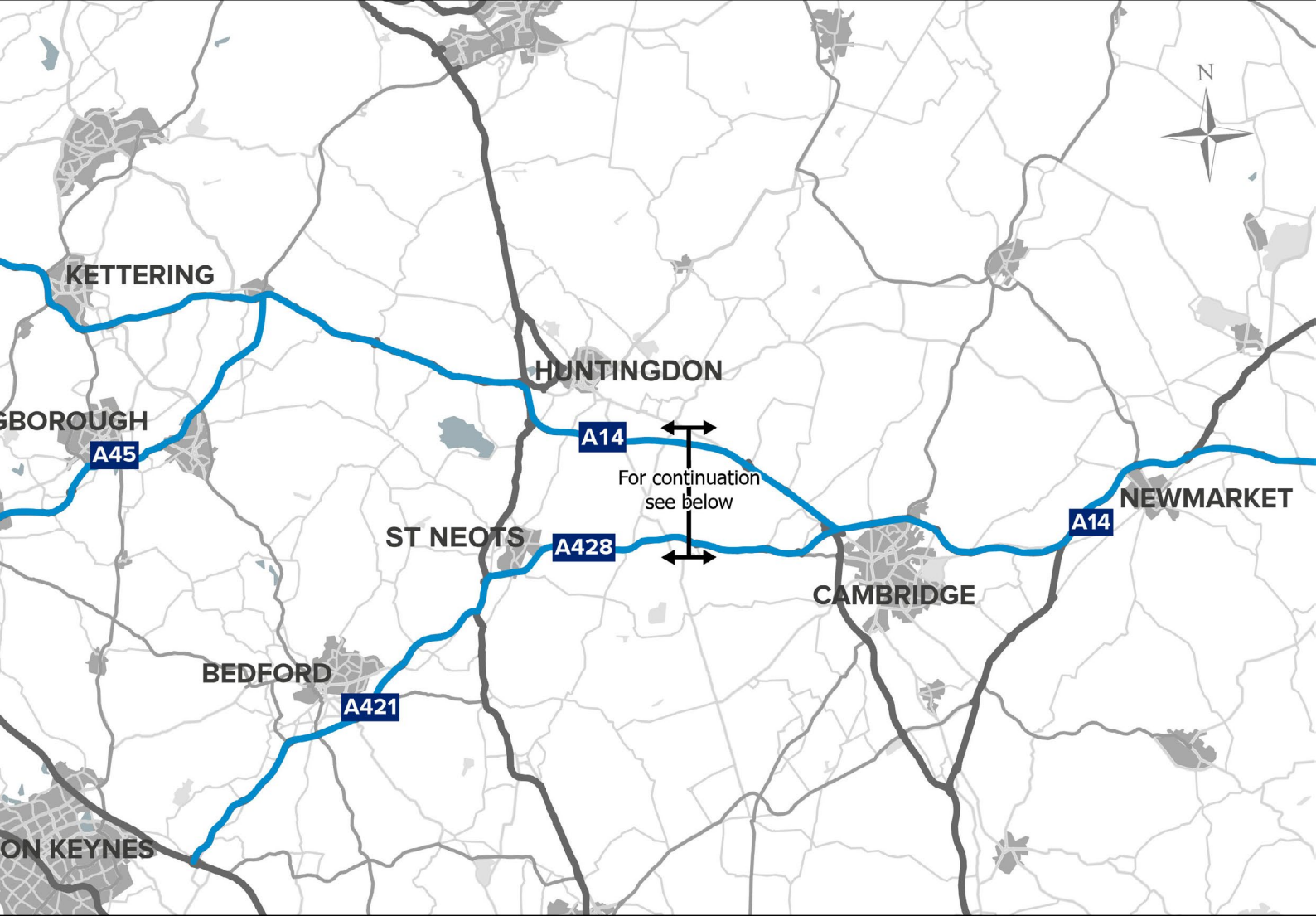
**A technology-enabled network**

- Limited communications to drivers on key roads such as the A14, worsening traffic and causing delays
- Limited electric vehicle charging points accessible to longer distance traffic, which may be discouraging the uptake of low carbon vehicles









## Initial route objectives

We want to provide safer and more reliable journeys for all those who use or live alongside our network, and support the route in achieving the economic and housing growth ambitions of surrounding areas. Based on our engagement and data analysis, we have defined a set of objectives for the route. The table below shows the route objectives and how they contribute to the DfT's six strategic objectives for the SRN as a whole..

Ref.	Route objective	DfT's strategic objectives for our network					
		Improve safety for all	Network performance	Improved environmental outcomes	Growing the economy	Managing and planning the SRN for the future	A technology-enabled network
A	<p><b>Investigate safety issues at identified locations.</b></p> <p>Consider known safety issues on links and junctions such as A14 at Bury St Edmunds, Copdock as well as between Ellington and Thrapston to the benefit of motorists, local communities and active travel users</p>	✓					
B	<p><b>Supporting strategic East/West connections to support the Energy Coasts.</b></p> <p>Develop safe and efficient east-west connectivity for strategic movements to and from the East of England to support both the local and national economy</p>		✓		✓		
C	<p><b>Promote sustainable access to key freight destinations.</b></p> <p>Support partners to encourage modal shift away from car and HGV to more sustainable modes to and from Freeport East to the benefit of the environment, communities and road users with a particular focus on freight movements</p>		✓	✓			
D	<p><b>Improve communications to better inform drivers.</b></p> <p>Better inform users of incidents to reduce exposure to potential delay and uncertainty surrounding journey time reliability to drivers and improve their end to end journey experience on the A14 corridor and M6 to support the regional and national economy</p>		✓			✓	
E	<p><b>Support the needs of the freight industry.</b></p> <p>Support the development of more rest facilities and parking particularly on A14 for HGVs by providing additional driver service areas and facilities for HGVs to ensure their safety and support the national economy</p>	✓			✓		
F	<p><b>Reduce the impact of strategic traffic using local roads.</b></p> <p>Reduce the impact of local communities caused by strategic traffic using local roads at junctions</p>		✓	✓			
G	<p><b>Support planned sustainable future housing and business development.</b></p> <p>Support sustainable housing and business development in growth areas such as Kettering, Northampton and Bedford to benefit the regional economy</p>		✓	✓	✓		

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## Next steps

The 20 route strategy Initial overview reports will combine with other related evidence to inform the broader *SRN initial report*<sup>3</sup> as part of the RIS process for the third road period (2025-2030). The *SRN initial report* includes an assessment of the current state of the network and user needs from it, potential maintenance and enhancement priorities, and future developmental needs and prospects. DfT will consult on this *SRN Initial report*, which will serve to inform the RIS and *Strategic business plan*<sup>4</sup>.

We will finalise the Route strategy overview reports following feedback on the publication of these Initial overview reports. They will be used as a forward planning tool by National Highways to help identify investment opportunities for enhancements, as well as to support decisions around operating and maintaining our network. Providing an understanding of the strategies for each route will also help inform the decisions taken by our interested parties. These finalised Route strategy overview reports will also serve to inform the RIS and *Strategic business plan*.

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<sup>3</sup> National Highways (2023) *Strategic Road Network Initial Report*. <https://nationalhighways.co.uk/futureroads/>

<sup>4</sup> National Highways' Strategic business plan will be published later in road period 2 (2020-2025)



**Helping  
the nation  
to thrive**

# 01 Introduction

Our strategic road network (SRN) is the backbone of the country. Over 4,500 miles of motorways and major A-roads connect people, build communities, create opportunities and help the nation thrive.

Our network provides safe, high-speed connections that:

- Enable businesses to transport products and services
- Provide access to jobs and suppliers
- Facilitate trade and investment
- Support commercial and housing development that is integrated with local roads and other modes of transport

The SRN also supports leisure journeys, connecting people and places, and will play a central role in delivering the social, economic and environmental needs of the nation, especially as we seek to reduce the carbon footprint of our network.

To plan for the future, we are taking a long-term view of our network and the trends that could impact transport, road travel and personal and commercial mobility. We consider factors ranging from climate change and low-carbon transport to increasing automation, digital technologies and changing travel preferences. Route strategies are at the centre of this dynamic future planning of our network. They build on our *Connecting the country: Our long-term strategic plan to 2050*<sup>5</sup> that sets out our vision and plan for the SRN until 2050, aligning with the government's *Ten point plan for a green industrial revolution*<sup>6</sup>.

## Purpose of route strategies

Our route strategies are based on 17 routes across England, with some split into two sub-strategies where this better reflects our customers' end-to-end journeys. There are 20 reports in total. We outline the objectives of each route along with the constraints faced and the current and predicted future performance based on analysis and widespread engagement with our customers and neighbours. Our customers and neighbours include:

- Local authorities, devolved administrations, and Sub-national Transport Bodies
- Other transport network operators (including local highway authorities, Network Rail, port and airport operators)
- Operational partners (including, but not limited to, the emergency services)
- Road users
- Local communities
- Other relevant interested parties with a significant stake in the long-term development of the network
- Members of Parliament

We also provide a list of locations for further consideration to inform investment planning across National Highways and for the Road investment strategy (RIS). We develop and publish these route strategies to:

- Help us develop an understanding of the future state of the routes

<sup>5</sup> National Highways (2023) *Connecting the country: Our long-term strategic plan to 2050* <https://nationalhighways.co.uk/connectingthecountry>

<sup>6</sup> HM Government (November 2020) *The Ten Point Plan for a Green Industrial Revolution: Building back better, supporting green jobs, and accelerating our path to net zero.* [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/936567/10\\_POINT\\_PLAN\\_BOOKLET.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf)

- Identify the locations for further consideration to inform our investment programmes and guide our vision
- Give a practical tool to National Highways as a whole, while supporting external interested parties who anchor their infrastructure planning and investment around our network
- Help ensure that all investment delivers safer and more reliable journeys for our customers and neighbours

For clarity, this document does not:

- Identify committed schemes for delivery as part of future RIS periods. This will be part of the wider RIS setting process
- Commit to the delivery of local plans or economic growth developments mentioned
- Guarantee funding for any locations identified for further studying to understand the challenges and issues in more detail
- Preclude the inclusion of other locations for consideration in the light of other evidence or imperatives

## Route strategy reports

These Route strategy initial overview reports have informed the *SRN initial report*<sup>7</sup> that sets out our vision and proposed priorities for the third road period (2025-2030) and beyond.

The final Route strategy reports will be published by the end of the RIS period, which covers 2020-2025. The three delivery phases of route strategies are shown in Figure 1.

## Purpose of the report

This report is the route strategy for Felixstowe to Midlands. In this report, we detail the route context, current constraints on the route, and opportunities for improved connections with local roads and rail links. We set out intelligence-led route objectives aligned with the DfT’s six strategic objectives. These objectives aim to ensure the route can serve its function, while mitigating the identified constraints and challenges. They conclude with locations for further consideration to achieve the route objectives.

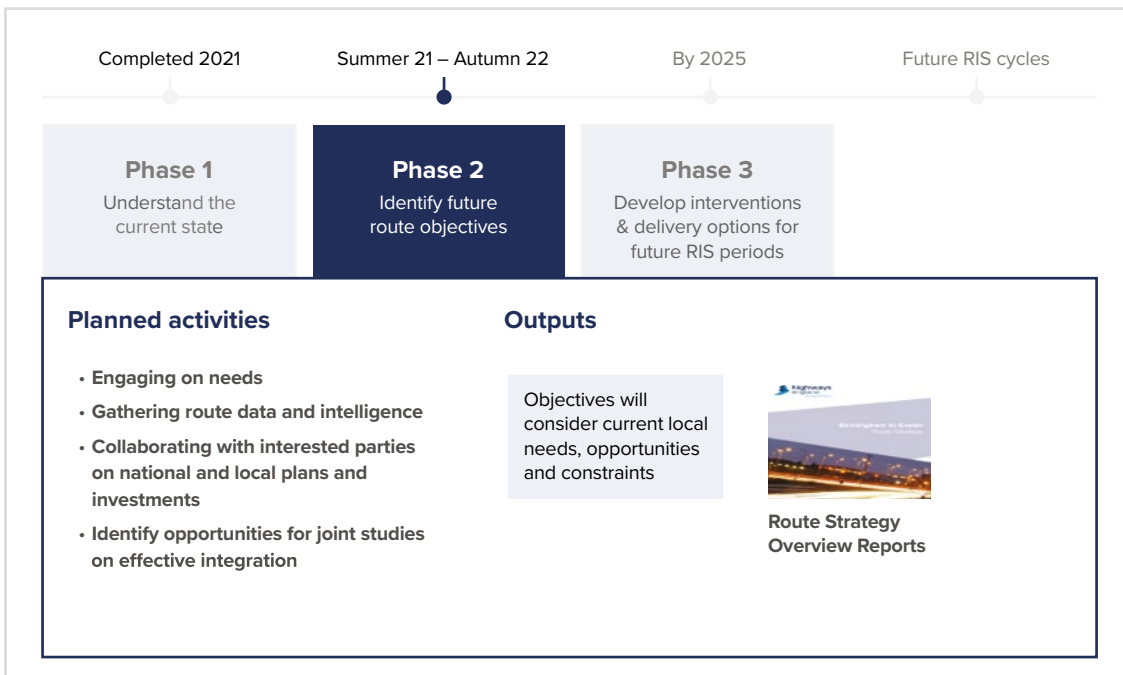


Figure 1: The route strategies delivery phases

<sup>7</sup> National Highways (2023) *Strategic Road Network Initial Report*. <https://nationalhighways.co.uk/futureroads>



The route objectives and locations for further consideration will be presented to DfT to inform future decision-making about investment planning through the RIS. It should be recognised that not all aspirations outlined in this report can be funded or delivered.

## The development cycle for the third Road Investment Strategy (RIS3)

Preparing route strategies is a requirement under the Infrastructure Act as well as a National Highways Licence requirement. The Licence sets out the Secretary of State for Transport's statutory directions and guidance to National Highways. It states that we must periodically prepare and publish route strategies covering the whole of the network to maintain an understanding of how the network is performing, while identifying any potential challenges. Each set of route strategies informs each RIS outlined by government, as well as supporting decision-making for the ongoing management and development of the network.

Route strategies are one of the key steps of research required by DfT to inform the setting of a RIS. Following the setting of RIS1 and RIS2, which covered the first road period (2015-2020) and second road period (2020-2025), we are now in our third round of route strategy planning informing RIS3 for the third road period (2025-2030) and beyond.

Looking across the whole of the SRN, our route strategies form one of the most important parts of the 'research' phase of the RIS3 development cycle. These strategies explore the current performance and future pressures on every stretch of the SRN, covering matters such as safety, reliability, congestion, environmental impacts, and local ambitions for economic and housing growth. Through the extensive engagement we have undertaken to inform the strategies, we provide insight to DfT and government into local, regional and national priorities for the SRN to support investment decisions for RIS3 and beyond. Grounded in evidence, the strategies identify the immediate needs of the network as well as highlighting longer-term issues or potential opportunities as shown in Figure 2.



Figure 2: The RIS development cycle

We have developed a revised approach to route strategies, building on past versions, to ensure they respond to the current and future needs of our customers and neighbours. The approach for route strategies is outlined in our approach document *Vision for route strategies: Planning for the future of our roads*<sup>8</sup>.

Our ambitions for route strategies, summarised in Figure 3, are to be forward-looking, widely supported, and integrated with other networks and modes of travel. They will consider the implications of local development plans and government ambitions and be dynamic to respond to the changing needs of our customers and neighbours in how they use and interact with our network. Such needs may evolve as a result of how people use our network due to COVID-19, environment considerations, or the need to support strategic connections and integrated solutions that connect locations, all of which will have an influence on the scale and type of future investments. We will work with interested parties to ensure that the route strategies are widely supported and integrated into regional and local strategies.

## Engagement with customers and neighbours

Engagement with customers and neighbours has been central to developing our route strategies. We have already gathered a wealth of evidence from the previous rounds of route strategies and through our ongoing monitoring of road condition and performance.

Building on engagement to date, we have worked with Sub-national Transport Bodies, Office of Rail and Road, Department for Transport, and Transport Focus to ensure a diverse range of people and their views are represented. This has allowed us to further improve our understanding of our customers and neighbours' requirements, helping us identify locations for further consideration to improve the SRN.

We will continue to evolve this engagement process for future cycles of route strategies. We used a range of methods to gather information from customers and neighbours throughout the route strategies' evidence collection period, which ran from August to December 2021 (Figure 7). These included round tables, workshops, and an online feedback form and we designed the approach to be more inclusive by engaging with, and learning from, a wide range of interested parties.

Thinking about how the SRN integrates with the surrounding rail and road network, including parts of the Major Road Network (MRN) and local roads, we designed our engagement around the following objectives:

- To understand the current role of the SRN and how it could better support the aspirations of customers and neighbours of the future
- To gather views and seek evidence on current and future issues, challenges and opportunities – both local and strategic

We have also gained an in-depth understanding of what our road users want nationally from Transport Focus' *Strategic roads user survey 2021/22*<sup>9</sup> into road users' priorities for improvements to journeys on the SRN. This research was based on focus groups and interviews with all types of road users across the country, alongside a survey of more than 5,000 drivers. It asked for users' views on key issues, such as sustainability and electric vehicles, and the stress of driving on the SRN.

From this research, Transport Focus identified that the majority of road users want the focus of investment to be on keeping National Highways' existing roads in good order before building new ones. Their top priority for improvement to journeys on the SRN is road surface quality, followed by the safer design and upkeep of roads.

<sup>8</sup> Highways England, 2021, *Vision for route strategies Planning for the future of our roads*, <https://nationalhighways.co.uk/media/w0vhd3un/vision-for-route-strategies.pdf>

<sup>9</sup> Transport Focus, 2022, *Strategic Roads User Survey - 2021/22 Summary Report*, <https://www.transportfocus.org.uk/publication/strategic-roads-user-survey-2021-22-summary-report/>

**EASY TO MAINTAIN**

Minimal resource, cost and time to update, becoming an 'on the shelf' approach to strategic RIS planning.

**DYNAMIC**

Flexible and responsive to significant external influences, such as carbon reduction and the environment, between RIS settlements.

**WIDELY SUPPORTED**

Recognised externally, as the principal network planning tool for the strategic road network.

**BROAD**

Identify a full range of options and opportunities in each RIS cycle informing operational and investment priorities.

**FORWARD THINKING**

Priorities for all parts of the strategic road network to inform multiple RIS cycles.

**INTEGRATED AND COLLABORATIVE**

Recognise needs of customers and neighbours, approach to be widely accessible and integrated with the rest of the transport system where it benefits the strategic road network.

**PLANNING THE FUTURE OF OUR ROADS**

Figure 3: Our ambition for route strategies

Users also want to see better management of roadworks and of unplanned delays, such as incidents or breakdowns, and better information about unplanned disruptions to journeys. Walkers, cyclists and horse riders using the SRN highlighted concerns about the speed of traffic and want action on lighting and litter. This research will be used by Transport Focus to make recommendations about what National Highways should be required to deliver during the third road period (2025-2030).

The findings from the Transport Focus survey align with findings from our route strategies engagement with customers and neighbours across the SRN.

Engagement during workshops with interested parties (shown in Figure 6) identified the following national priorities:

- Better driver education aimed at teaching road users about new technology
- Deeper consideration of environmental constraints at the earliest stage of planning, and consideration for key environmental issues such as biodiversity, air quality and sustainable transport
- A resilient and reliable SRN to support economic growth
- Better integration between the SRN and local road network to improve journey times
- Greater support for the freight industry in terms of:
  - The future of low emission vehicles and commercial fleet
  - The impact of congestion on productivity, fuel cost, driver breaks, lorry park locations and delivery times
- Greater collaboration and early engagement with interested parties, and greater alignment between network operators, including consideration for joint funding opportunities

In addition, feedback on the SRN provided by communities and neighbours via the online tool, showed similar national priorities. The breakdown of the 1,700 responses we received via the online feedback tool are shown in Figure 4 and Figure 5.

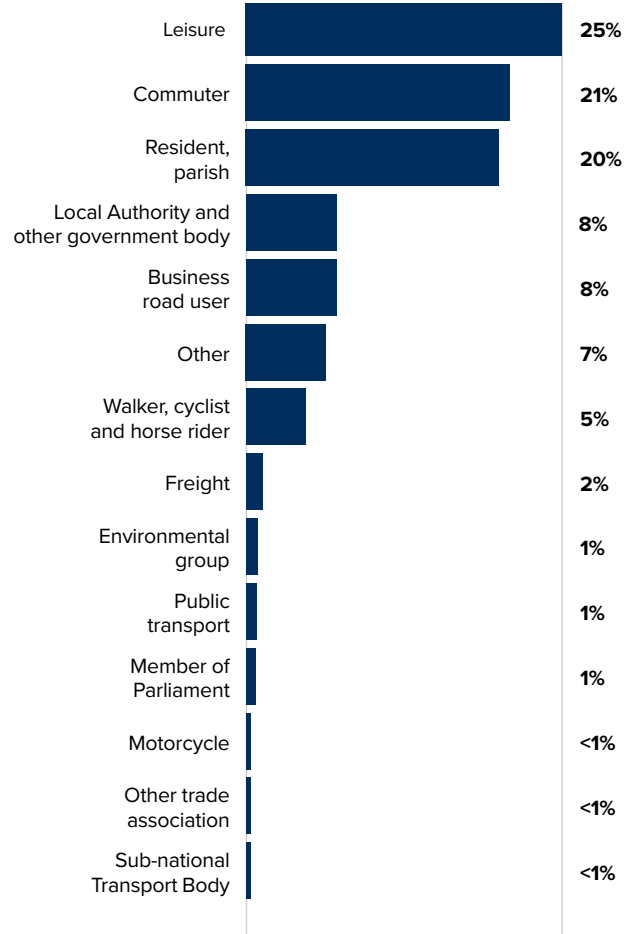


Figure 4: All responses to online tool by participant type

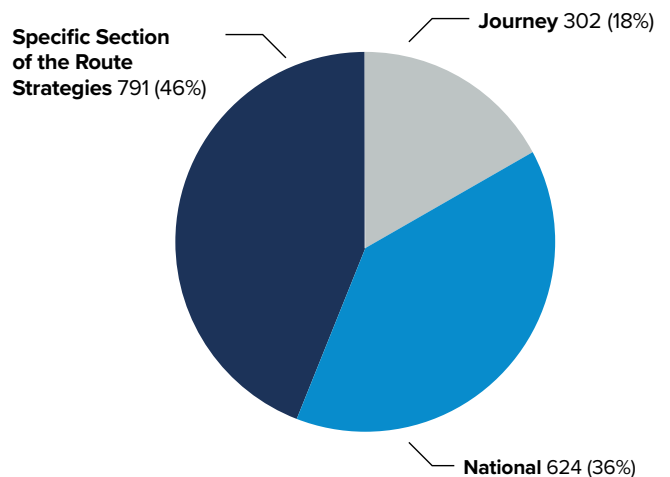


Figure 5: All response to online tool by type

A breakdown of the national issues and general feedback raised is shown in Figure 8, which highlights that, in terms of the issues identified:

- 26% were related to safety
- 23% were related to congestion
- 28% were related to the environment or carbon

### DfT’s strategic objectives for the strategic road network

DfT have published six objectives for the SRN. These are the strategic objectives for RIS3 (2025-2030) that have been agreed between National Highways and DfT and were set out in the RIS3 Planning ahead<sup>10</sup> document in December 2021. They cover safety, network performance, environment, economy, management and planning for the future and technology.

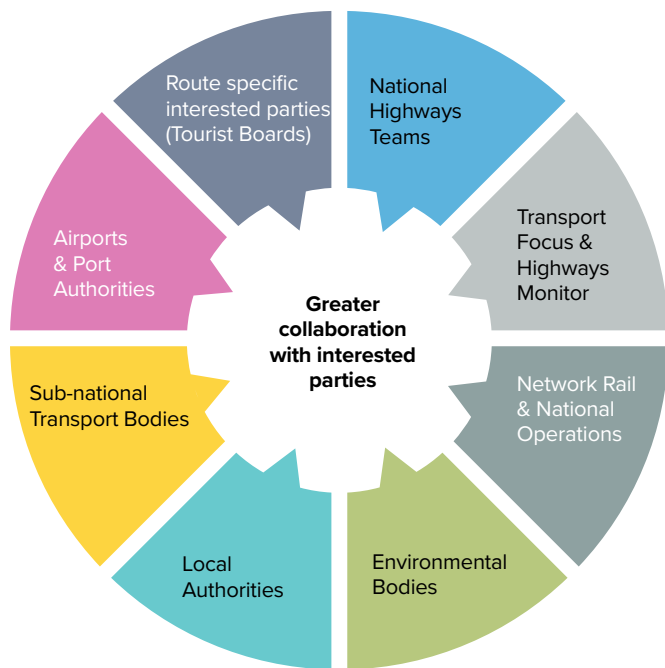


Figure 6: Interested parties involved in the route strategy engagement



Figure 7: Timeline of engagement with interested parties

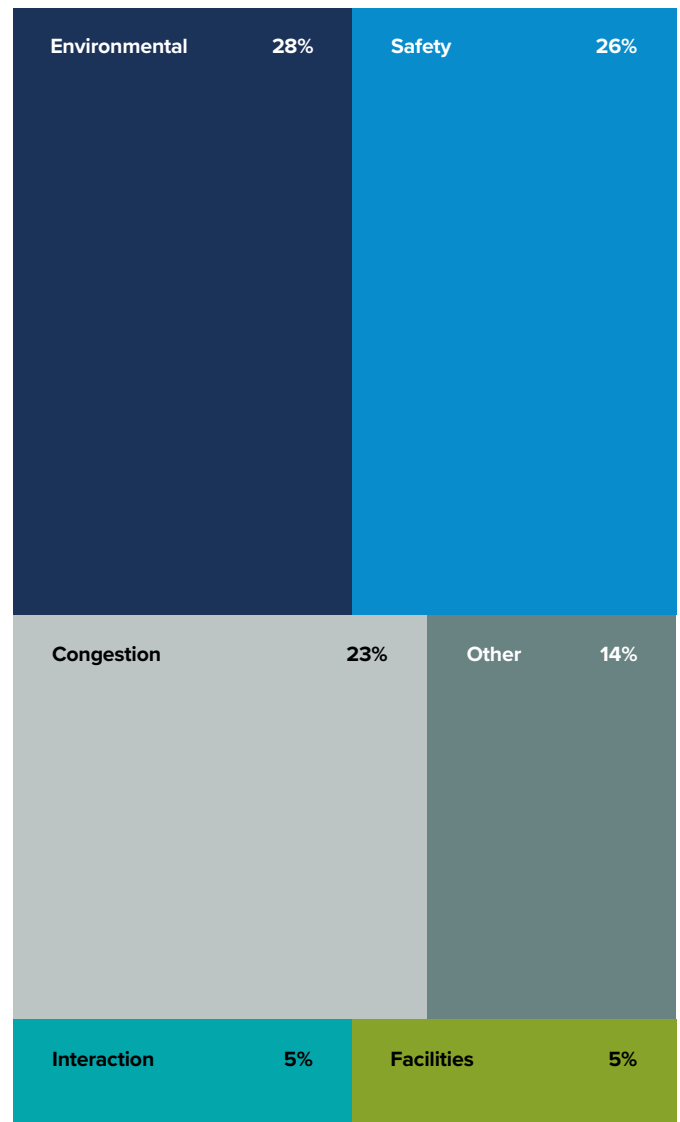


Figure 8: National themes from feedback through the online tool

<sup>10</sup> Department for Transport, December 2021, *Planning ahead for the Strategic Road Network: Developing the third Road Investment Strategy*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1045938/planning-ahead-for-the-strategic-road-network-developing-the-third-road-investment-strategy.pdf)

All our route strategies need to show how they contribute to the delivery of the DfT's six strategic objectives for our network, to ensure we meet future challenges. These help us create relevant, meaningful and effective strategies that address evolving concerns. Such concerns include decarbonisation, ecology, the need for new homes and the desire for a better- connected country.

This aligns with the Infrastructure Act 2015, where National Highways has a statutory obligation to have regard to the effect of its functions on the environment, and the safety of users of highways.

At a national level, National Highways has existing commitments and ambitions to contribute to the DfT strategic objectives, as outlined below. The strategies for each route are aligned with these. They include:

#### **i) Improving safety for all**

- Our safety approach

#### **ii) Network performance**

- Expectations over COVID-19 and travel demand
- Our ambition for supporting freight, logistics and the coach industry
- Our ambition for supporting end-to-end journeys for a variety of modes
- Our approach to trunking and de-trunking for SRN

#### **iii) Improved environmental outcomes**

- *Net zero highways: Our 2030 / 2040 / 2050 plan*<sup>11</sup>
- Our plan for net zero carbon travel on our roads covering emissions from the vehicles using the SRN
- Our approach to improved environmental outcomes

### **DFT'S SIX STRATEGIC OBJECTIVES FOR THE STRATEGIC ROAD NETWORK**

-  Improving safety for all
-  Network performance
-  Improved environmental outcomes
-  Growing the economy
-  Managing and planning the SRN for the future
-  A technology-enabled network

#### **iv) Growing the economy**

- Our contribution to growing the economy and levelling up
- Our approach to spatial planning

#### **v) Managing and planning the SRN of the future**

- Our approach to asset management

#### **vi) A technology-enabled network**

- Our ambition for digital roads

<sup>11</sup> National Highways, *Net zero highways: our 2030 / 2040 / 2050 plan*, <https://nationalhighways.co.uk/media/eispcjem/net-zero-highways-our-2030-2040-2050-plan.pdf>

## IMPROVING SAFETY FOR ALL



**OUR SAFETY APPROACH:** We are committed to reducing the number of road users killed or seriously injured on the strategic road network, by 50% (from the 2005-2009 baseline) by the end of 2025, with a long-term vision to eliminate harm arising from use of the SRN. We recognise:

- Safety is National Highways' top priority. We believe that everyone who travels or works on our roads should get home safe and well
- Billions of miles are travelled on the SRN each year, with the vast majority of these safe and reliable journeys
- Our roads are some of the safest in the world, but we know there is more we can do. Every death or serious injury on our roads is a tragedy and we are committed to creating the safest roads in the world

## NETWORK PERFORMANCE



**EXPECTATIONS OVER COVID-19 AND TRAVEL DEMAND:** COVID-19 has had the biggest single-year impact on road traffic since records began in 1949. But car traffic on the SRN is now back to approximately 95% of pre-pandemic levels.

At the time of writing, while the onset of COVID-19 and the rapid rise in homeworking initially decreased demand for both public and private transport, the greatest impact has been on public transport, with private vehicle travel the first mode to rebound. Homeworking has not noticeably reduced demand for the SRN. An estimated 43% of UK jobs can be done entirely from home, but nearly two-fifths of businesses expect 75% of their workforce to eventually return to their normal place of work.

It is unclear if the scale of homeworking will continue or how it will affect long-term travel demand. For the short-term, transport flow data has generally shown that traffic peaks have become flatter but broader, with traffic more evenly spread across the day, suggesting some behaviour change.

Continued hybrid working could see a redistribution of demand, flattening the daily morning and afternoon peaks, and instead creating a mid-week peak.

The pandemic has also brought wider uncertainties, such as whether these loosened physical ties to employment locations could see increases in suburban living, as workers that are more 'knowledge-based' than 'location based' take advantage of greater geographic mobility across the country.

Changes in leisure trends caused by the pandemic could also have implications for the SRN, such as the changing demand for high street retail or choices around domestic versus overseas holiday-making. Such needs may evolve, all of which will have an influence on the scale and type of future investments.

**SUPPORTING FREIGHT, LOGISTICS AND THE COACH INDUSTRY:** We continue to collaborate with our freight and logistics customers to better understand how the SRN can support their operations, and work with wider government in the delivery of their *Future of freight plan*<sup>12</sup>. We recognise that lorry parking and facilities are key to enabling freight and logistics businesses to operate safely and efficiently. A lack of parking and good quality facilities impacts the recruitment and retention of drivers into a sector that is crucial to the country's economy. We are keen to play our part in ensuring good quality facilities are in the right places and that we support the sector in recruiting and retaining a diverse pool of drivers.

Our ambition is to improve lorry parking by:

- Intervening where the market is not meeting the demand for lorry parking (areas of high demand with insufficient facilities)
- Working with operators to improve the quality of existing facilities
- Ensuring our major projects consider the needs of lorry drivers

<sup>12</sup> Department for Transport, 2022, *Future of Freight: a long-term plan*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1085917/future-of-freight-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1085917/future-of-freight-plan.pdf)

In addition to supporting lorry parking, we remain focused on:

- Reducing congestion on the SRN, which affects the speed, reliability and cost of logistics, as well as driver safety when journeys exceed regulated driving time
- Improving the suitability of alternative routes and diversions off the SRN
- Supporting the industry in achieving net zero carbon emissions by facilitating the adoption of alternative fuels linked to parking facilities
- Ensuring resilience on key freight routes, such as between ports, airports, wharves and rail freight interchanges
- Increased data sharing on incidents, roadworks and diversions
- Understanding changes in how our freight and logistics customers use the SRN so we can continue to provide the best possible service

#### IMPROVING END-TO-END JOURNEYS FOR

**A VARIETY OF MODES:** The SRN plays an important role in supporting a wide range of customer journeys by different modes of transport. We are exploring how to support customers' end-to-end journeys by creating travel choices that deliver our target of net zero carbon customer journeys by 2050. We recognise our role in supporting an integrated transport network that allows our current and future customers to re- route, re-time, re-mode and reduce their journeys, especially at peak times and during major disruption.

Through understanding National Highways' role in influencing and improving travel, we will identify how to support customers utilise the right mode for the right journey. By working closely with operators, we will ensure our network supports bus and coach services. And through the development of active travel networks we can help deliver health and wider social benefits.

Our focus is on delivering net-zero customer journeys by 2050 through behaviour change towards sustainable travel by:

- Understanding travel behaviours to identify customer needs for end-to-end journeys, supporting the development of a travel demand management strategy
- Ensuring our customers have the information they need to make the travel choices that are right for them
- Improving integration of different modes of travel by working with key interested parties to deliver a range of active travel and public transport interventions
- Using behaviour change and techniques to manage future travel demand and minimise disruption from major works
- Continuously improving our offer for walkers, cyclists and horse riders

#### SRN TRUNKING/DETRUNKING: : For RIS2

(2020-2025), we were asked to explore changes to the SRN to ensure the network aligns with RIS2 strategic priorities, reflected in the *Strategic business plan*. This plan relates to improving connections between main urban centres, to international gateways, to peripheral regions (for levelling up) and strategic cross-border routes (to strengthen union connectivity). It included a commitment to explore potential asset ownership changes between ourselves and local highway authorities that could be implemented no earlier than the start of RIS3 (2025-2030). DfT have produced a shortlist of 18 trunking and two de-trunking candidates, identified following the draft RIS2 public consultation in 2018, for us to assess desirability and viability of asset transfer. De-trunking is the process of returning a National Highways road to the local highway authority control and visa versa for trunking. These candidates were put forward by a range of external interested parties, including local authorities, Local Enterprise Partnerships and Chambers of Commerce, then shortlisted by DfT.



There is ongoing work to review the assessment evidence and recommendations, after which government ministers are expected to announce the candidates that will progress to the detailed development stage, which will be led by National Highways and incorporated in the forward study programme and wider RIS 3 process.

### IMPROVED ENVIRONMENTAL OUTCOMES

#### NET ZERO HIGHWAYS: NATIONAL HIGHWAYS' 2030/2040/2050 PLAN<sup>13</sup>.

We are committed to being a Net Zero Carbon Company by 2050 (2040 for Maintenance and Construction emissions).



We published our ambitious net zero carbon plan in July 2021. It details how we will achieve net zero emissions for: our corporate space by 2030, our maintenance and construction emissions by 2040, and road user emissions by 2050. We're keen to support a sustainable future and know that road travel is vital to enabling a thriving net zero economy. Our plan strengthens the decarbonisation of the transport sector, which remains the biggest emitting sector of greenhouse gases in the country.

We also need to consider how the SRN will be resilient to climate change. Our route strategies will need to recognise that the schemes we construct are likely to be subjected to changes to the climate, such as flooding.

Our route strategies demonstrate how we will continue to connect the country and ensure that the SRN is environmentally sustainable and resilient to climate change. This includes understanding the right schemes and options that support integration across different modes of travel, improve the SRN's capacity through digital roads, and deliver broader environmental enhancements. This will change the way we work both internally and with our supply chain and wider interested parties.

As part of our net zero commitment, we need to consider the contribution our schemes make to sustainable development. We are adopting the PAS2080 Carbon Management in Infrastructure Standard that will help us invest only where we can achieve our zero carbon goals. Guided by the PAS2080 Standard, we will use an investment hierarchy where we favour opportunities to deliver whole life value without undertaking construction. We will demonstrate that we have considered all interventions during our planning stages and that every effort is made to avoid negative impacts and maximise environmental benefits throughout the lifecycles of schemes. We will also work with government and the private sector to set out a clear proposition by 2023 for electric vehicle charging on our network. This will cover both customer need and the infrastructure required to deliver this.

More than ever we need to support the Government's wider plans for decarbonising transport. The SRN plays a pivotal role in supporting the transition to zero carbon cars, vans and heavy goods vehicles (HGVs), but we also recognise that we need to better integrate with other modes of transport too, including public transport and active travel.

#### NET ZERO CARBON TRAVEL ON OUR ROADS COVERING EMISSIONS FROM THE VEHICLES USING THE STRATEGIC ROAD NETWORK:

We have set an ambition for all of our customers to be travelling using net zero transport by 2050, in line with the UK Climate Change Act. Many of the actions that will deliver this ambition are out of our direct control, but that does not mean we cannot play our part. Our priorities are to help roll-out solutions to decarbonise HGVs and support the uptake of electric cars and vans. We will also continue our work on integrating the SRN with other transport modes, while working to improve the efficiency of the network.

<sup>13</sup> National Highways, *Net zero highways: our 2030 / 2040 / 2050 plan*, <https://nationalhighways.co.uk/media/eispcjem/net-zero-highways-our-2030-2040-2050-plan.pdf>

Our actions relating to reducing emissions from road users of our network include:

- Publishing our proposed approach to zero carbon HGV trials by the end of 2022
- Publishing a blueprint for electric vehicle charging services on our roads by 2023
- Integrating a strong modal shift programme in the third road period (2025-2030), building on our work to date

#### IMPROVED ENVIRONMENTAL

**OUTCOMES:** We know there's a requirement to balance people's need to travel on our roads with doing all we can to protect and improve the environment. That means we will continue to consider a wider range of environmental factors in our future planning, such as improving biodiversity, protecting ancient woodlands, reducing pollution in Air Quality Management Areas, and protecting Sites of Special Scientific Interest. These will form part of our considerations during our early planning. In response to these emerging issues, our latest route strategies take a balanced view on expanding the future capacity of the SRN. We now seek to develop strategies that produce balanced investment plans with schemes of different magnitudes, delivering across multiple objectives: safety, journey time improvements, network resilience, maintenance and renewals, technology, environmental enhancement, and integration with more sustainable transport modes. The outcome will be an SRN that supports the economy but also delivers on the wider environmental challenges.

## GROWING THE ECONOMY



### GROWING THE ECONOMY

**AND LEVELLING UP:** The SRN is a vital part of England's – and the UK's – transport infrastructure. It facilitates the movement of people and goods nationally, regionally and locally through connections to the Major Road Network and other transport infrastructure. The Government's levelling up agenda places emphasis on ensuring no community is left behind, particularly as we recover from the COVID-19 pandemic. With such a vital role in supporting the economy and facilitating connectivity - enabling access to jobs and homes, international gateways and supporting road-reliant sectors – National Highways and the SRN have a role to play in supporting the levelling up agenda and the wider aim of economic prosperity.

The Government is committed to strengthening transport connections across the UK.

Sir Peter Hendy's *Union connectivity review*<sup>14</sup> was published in late 2021. The Review recommends the creation of UKNET, a strategic transport network spanning the entire United Kingdom based on a series of principal transport corridors between key urban and economic centres, including international gateways. The findings of this report have been considered in the context of our route strategies and will be a key objective for our cross-border routes and the roads connecting to important ports.

Additionally, the SRN plays a critical role in enabling international connectivity and trade by providing reliable and resilient access routes to global markets via the country's network of international ports, airports and the Channel Tunnel. Enhancing these links and supporting these gateway locations to thrive, including maximising the opportunities of Freeports, is a key part of National Highways' role in supporting the national economy.

<sup>14</sup> Sir Peter Hendy CBE, 2021, *Union Connectivity Review Final Report*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1036027/union-connectivity-review-final-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036027/union-connectivity-review-final-report.pdf)

**SPATIAL PLANNING:** We recognise that businesses operate from the location that best suits their business requirements in terms of access to customers, the supply chain and employees. Location is equally critical to decision-making in the residential market, both for the house builder and the potential purchaser or occupier. In enabling new employment spaces and homes to be developed, at National Highways we engage fully and positively as a statutory consultee in the planning system.

This is in line with our statutory responsibilities as set out in our Licence, and in support of wider government policy and regulation. Our focus is on securing sustainable development, managing cumulative impacts of strategic growth, and minimising the potential for any negative impacts on the SRN.

### MANAGING AND PLANNING THE SRN FOR THE FUTURE



We recognise that asset management is our core business. It is the service we provide to maintain, operate, and enhance the SRN safely, reliably and effectively for all our customers. We manage over 4,500 miles of road, over 20,000 structures and 12 road tunnels, as well as drainage, earthworks, and technology equipment. We recognise that our customers rely on our roads to travel 96.8 billion miles every year, and our work helps unlock housing and employment sites across the country. One of our main priorities is managing these assets effectively and efficiently, to deliver the outcomes our customers and interested parties want.

We have adopted an asset management approach in order to align our strategy and planning activities to create, maintain, operate, and renew all of the assets that make up our network. Asset management links all our activities and supports our three imperatives: safety, customer service and delivery.

We know that good asset management is about understanding our customers and interested parties, identifying what they need and then using our assets effectively to deliver the right level of service. We are working to understand what satisfies our customers, and what we can do to influence this.

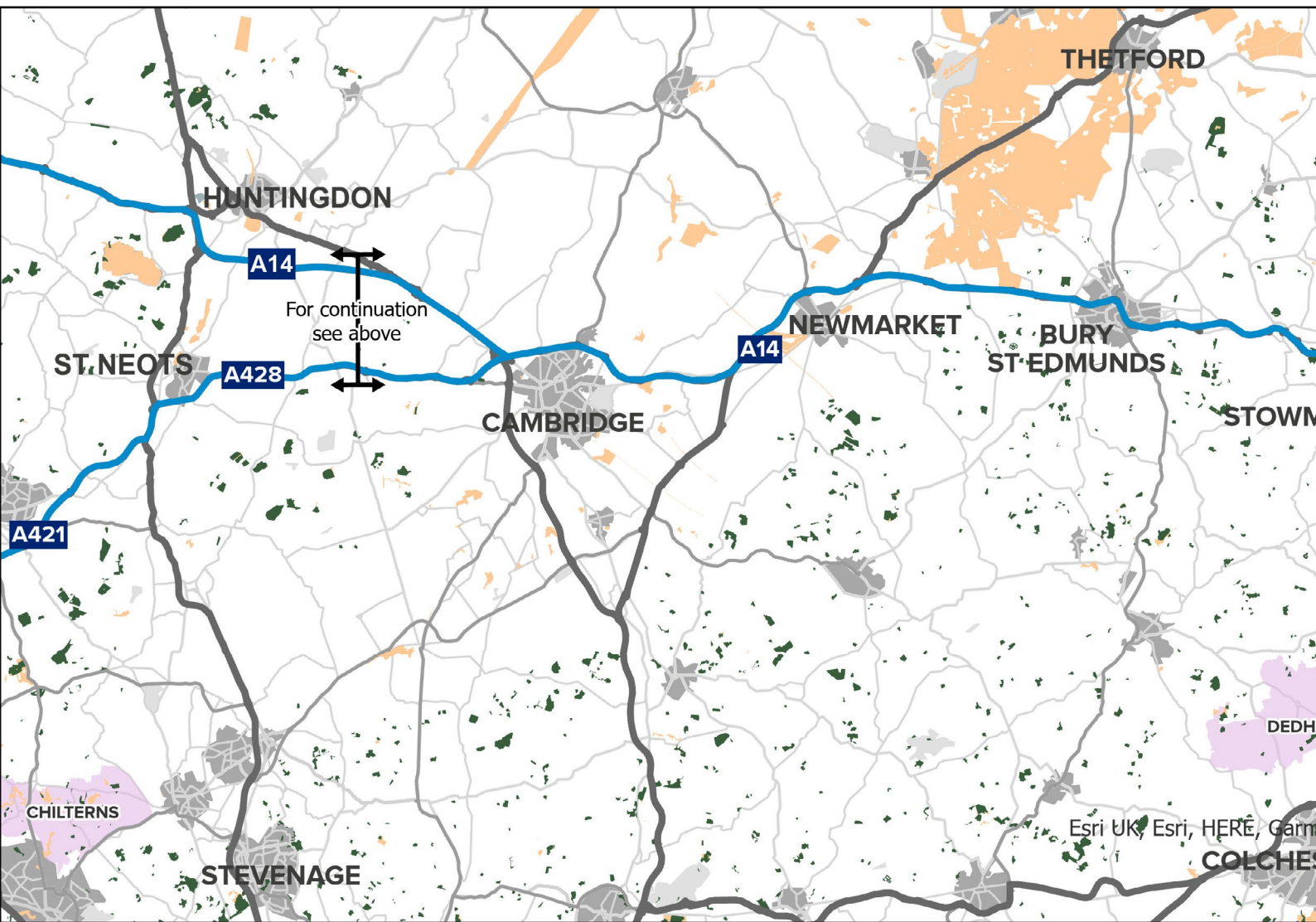
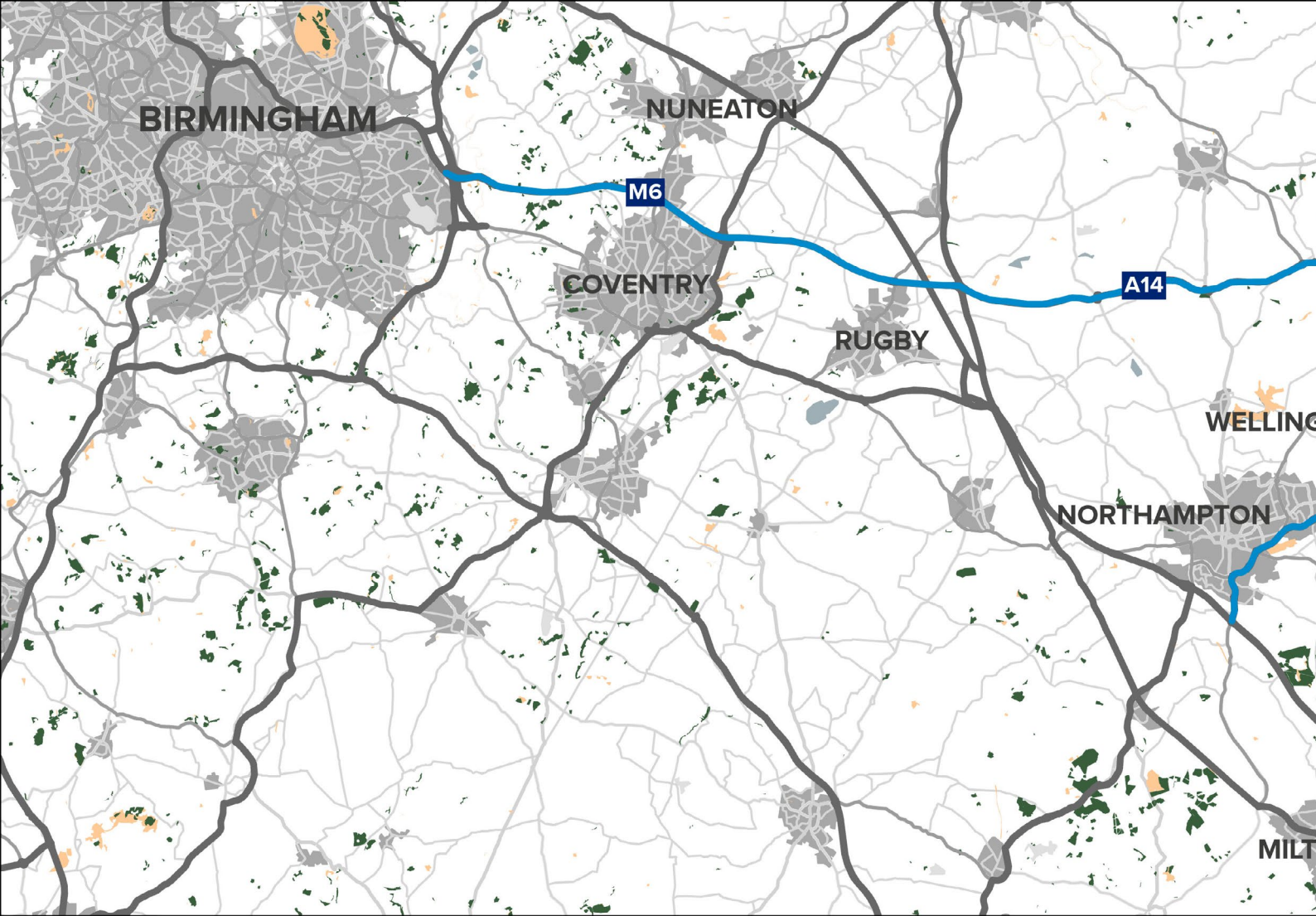
Our vision is to create an approach and establish ways of working that make sure all our asset management activity is aligned by following the key principles set out in our asset management policy. We work across the whole asset lifecycle, understanding that asset decisions we make may affect future service provision. This means that we are planning and accounting for emerging and evolving challenges around customer expectation, climate change and new technology. Since the beginning of the second road period we have continued on our journey to increase our asset management maturity, and our organisational objectives have developed significantly in light of COVID-19 and the Government's carbon plans.

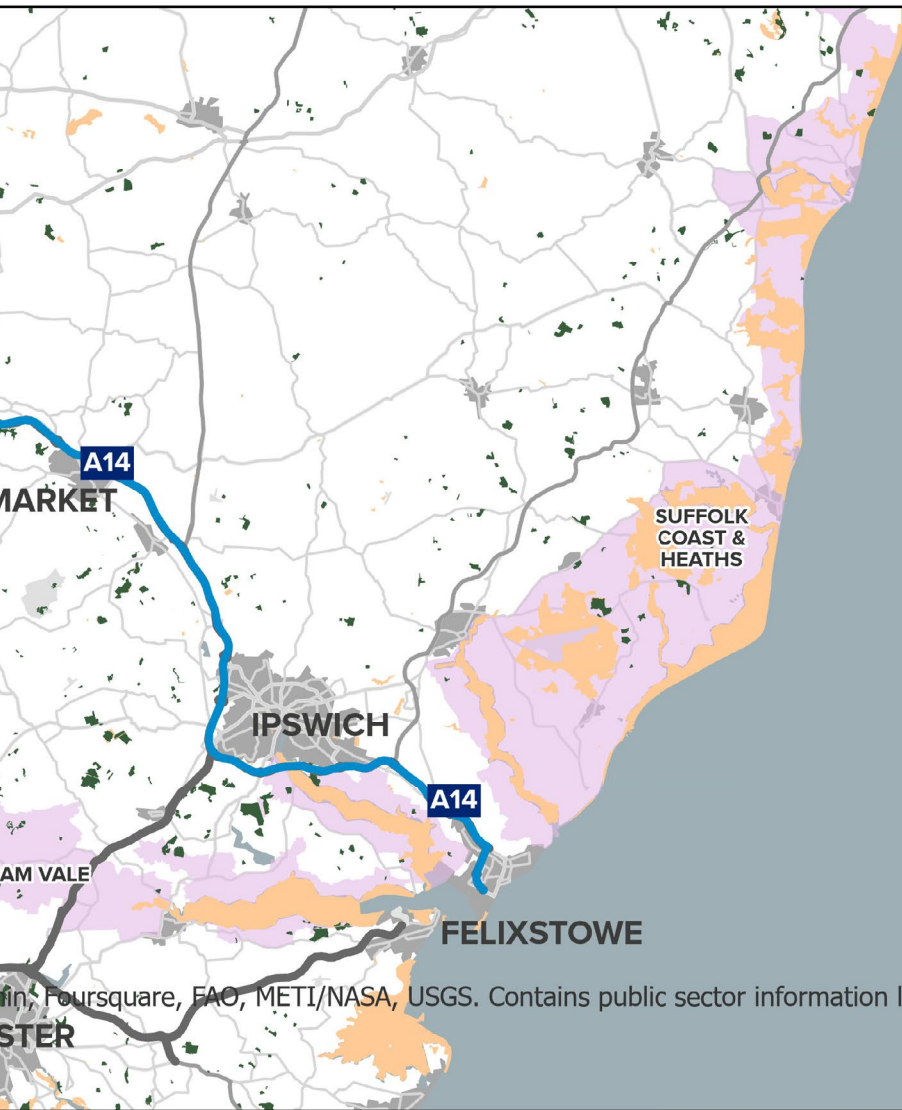
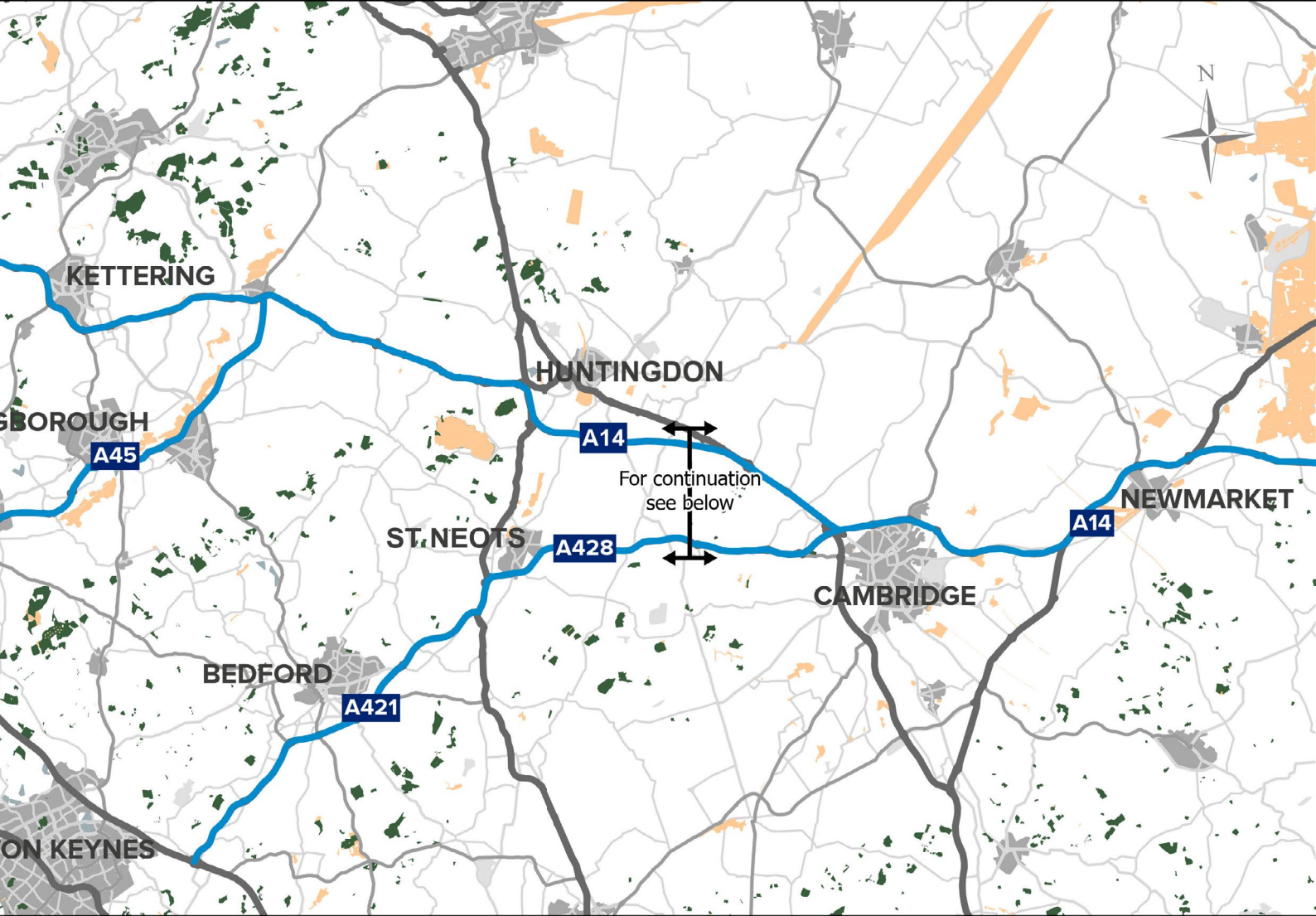
### A TECHNOLOGY-ENABLED NETWORK



**DIGITAL ROADS:** Our ambition for digital roads is to continue to harness data, technology and connectivity of people to places and communities and networks to improve the way the SRN is designed, built, operated and used. Our recently published *Digital roads strategy* (September 2021)<sup>15</sup> sets out how we will harness data, technology and connectivity to improve the way the SRN is designed, built, operated and used. This will also support our ambitions to achieve net zero carbon on the SRN. We have established three themes: Digital design and construction, digital operations and digital for customer. These themes will continue to frame our vision towards 2030 and beyond, increasing connectivity, automation and data.

<sup>15</sup> Digital Roads, *National Highways*, September 2021 <https://nationalhighways.co.uk/our-work/digital-data-and-technology/digital-roads/>





**Figure 9: Environmental constraints**





**Our  
network  
connects  
the country**

## 02 The route

The Felixstowe to Midlands Route is approximately 221 miles in length and contains the A14, A421, A428 and A45 corridors. The route also includes the A141 and the A1307 short stretches of road to the west of Huntingdon. The A141 and A1307 are currently planned to be de-trunked and handed over to Cambridgeshire County Council as part of the wider A14 Cambridge to Huntingdon Improvement Scheme Development Consent Order (2016).

The A14 is the principal arterial east-west SRN route, providing connectivity to destinations such as the Port of Felixstowe and Ipswich in Suffolk, then going across Cambridgeshire to Coventry and Birmingham in the Midlands. It also provides access to Northampton, Bedford, and Milton Keynes.

The route also consists of four key road corridors:

- The A428 linking Bedford and Northampton
- The A421 linking the A14 to the M1 via St Neots and Bedford
- The A45, which connects Rushden, Wellingborough and Northampton
- The M6 which provides access to distribution hubs

The route also provides access to the culturally and scientifically important city of Cambridge with its world-renowned university.

The route is used by cars and heavy goods vehicles (HGVs) to make longer, strategic journeys and deliveries from Freeport East, which includes the Ports of Felixstowe and Harwich. It provides direct access to Ipswich, Cambridge, and the key logistics and distribution hubs of Bedford and Milton Keynes in the East Midlands, which are important centres in the regional economy.

The A14 connects to roads that feature prominently in other route strategies:

- East of England route at Newmarket with the A11, and at Copdock with the A12
- London to Leeds route with the A1 at Eaton Socon
- London to Scotland East (South) route with the M1 at Catthorpe
- South Midlands Route with the M42 and M6 at Coleshill

The A11 provides access to the M11 and to Norwich and the A12 to London and the Dedham and Suffolk Coast Areas of Outstanding Natural Beauty (AONB). The A1 connects to the North of England, Scotland and the cities of Peterborough, Leicester and Nottingham where significant employment sites exist. The A14 connects to the M1 just outside Rugby, and the M42 at Coleshill.

While the A14, M6 and the A421 themselves are dual carriageways throughout, the A428 and A45 are a mix of single and dual carriageway.

Collectively, the corridor supports a diverse economy as it connects four key Local Enterprise Partnerships of New Anglia, Cambridgeshire and Peterborough, South-East Midlands, and Coventry and Warwickshire. These Partnerships work with local authorities, businesses and education institutions to accelerate growth, deliver new housing and provide jobs and enterprise that benefit their communities through local growth funds and initiatives.

Key employers across the corridor include Mercedes, Aston Martin, Red Bull, Barclays, Aldi, BMW, British Gas, IBM, and Rolls Royce. The majority of the global businesses within the corridor are involved in manufacturing and advanced technology within the transport industry. The route also provides connectivity to one of the largest energy coasts in the UK.

This route strategy is based on the road network as of the start of the second road period (2020 - 2025). During RIS1 and RIS2 the following schemes were opened to traffic:

- M6 Junction 2-4
- A14 Kettering Bypass Widening
- A14 Cambridge to Huntingdon
- A45/A6 Chowns Mill Roundabout Improvement

The A428 Black Cat to Caxton Gibbet scheme is committed for the second road period.

We recognise that some of the journeys on this route are part of longer journeys and therefore need to be considered in conjunction with strategies on other routes.





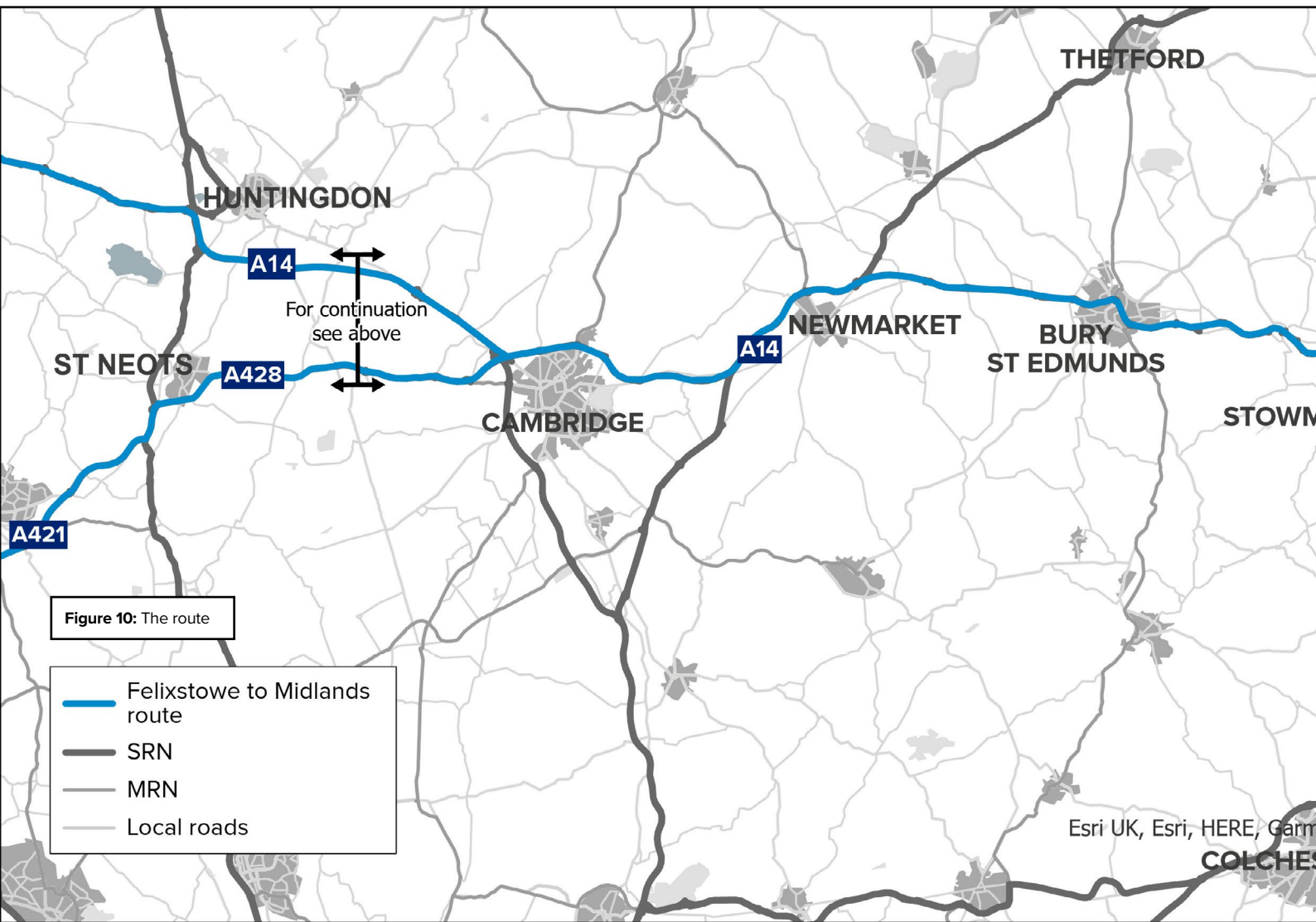
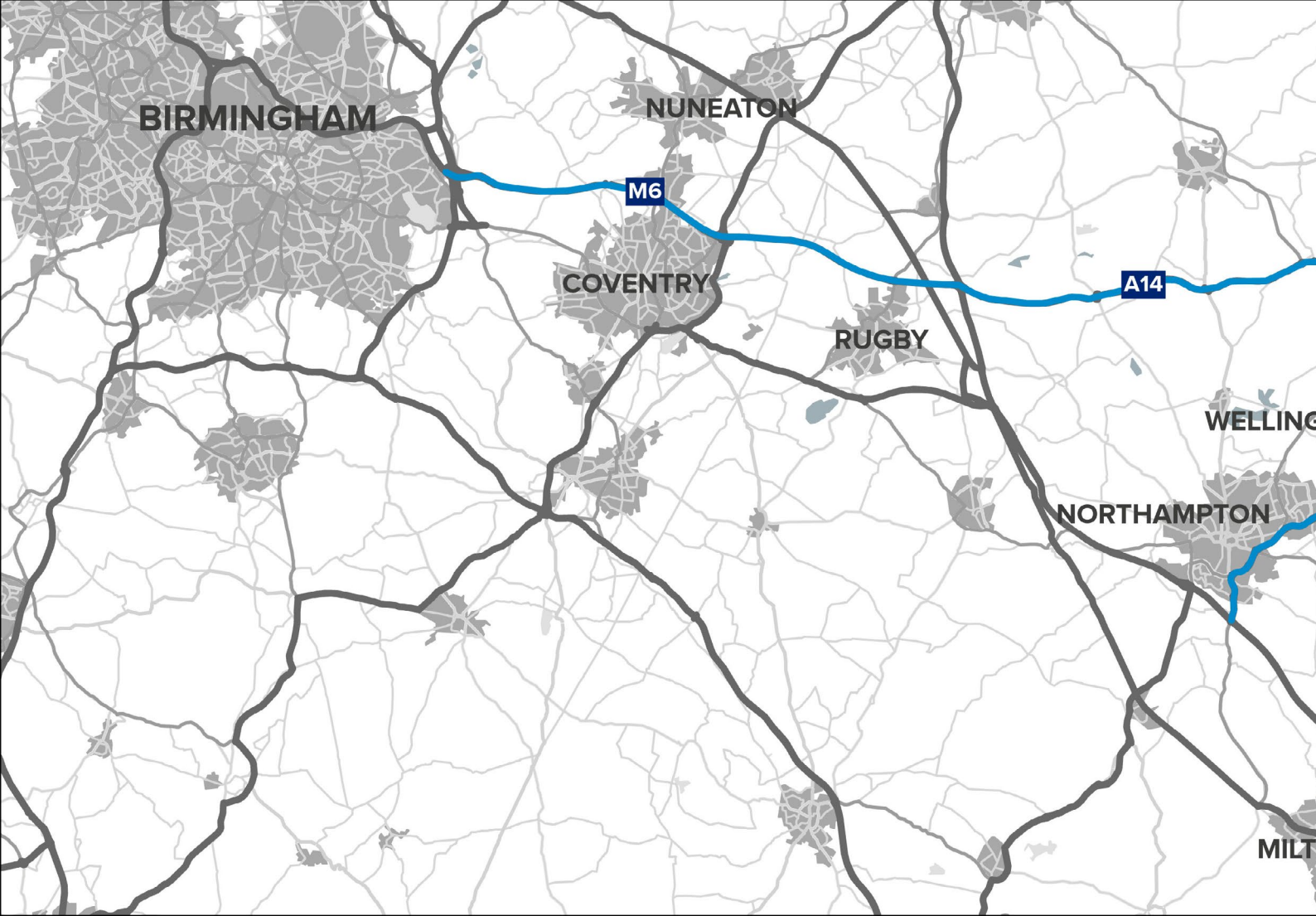
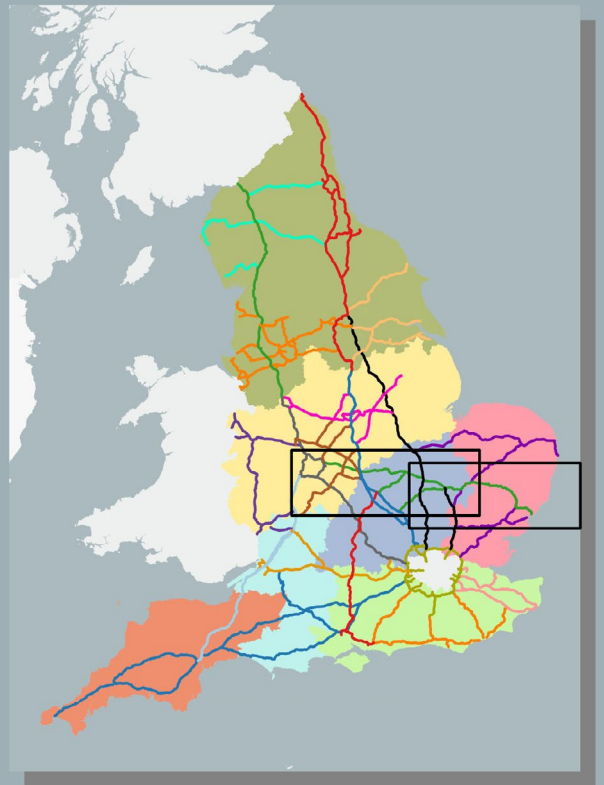
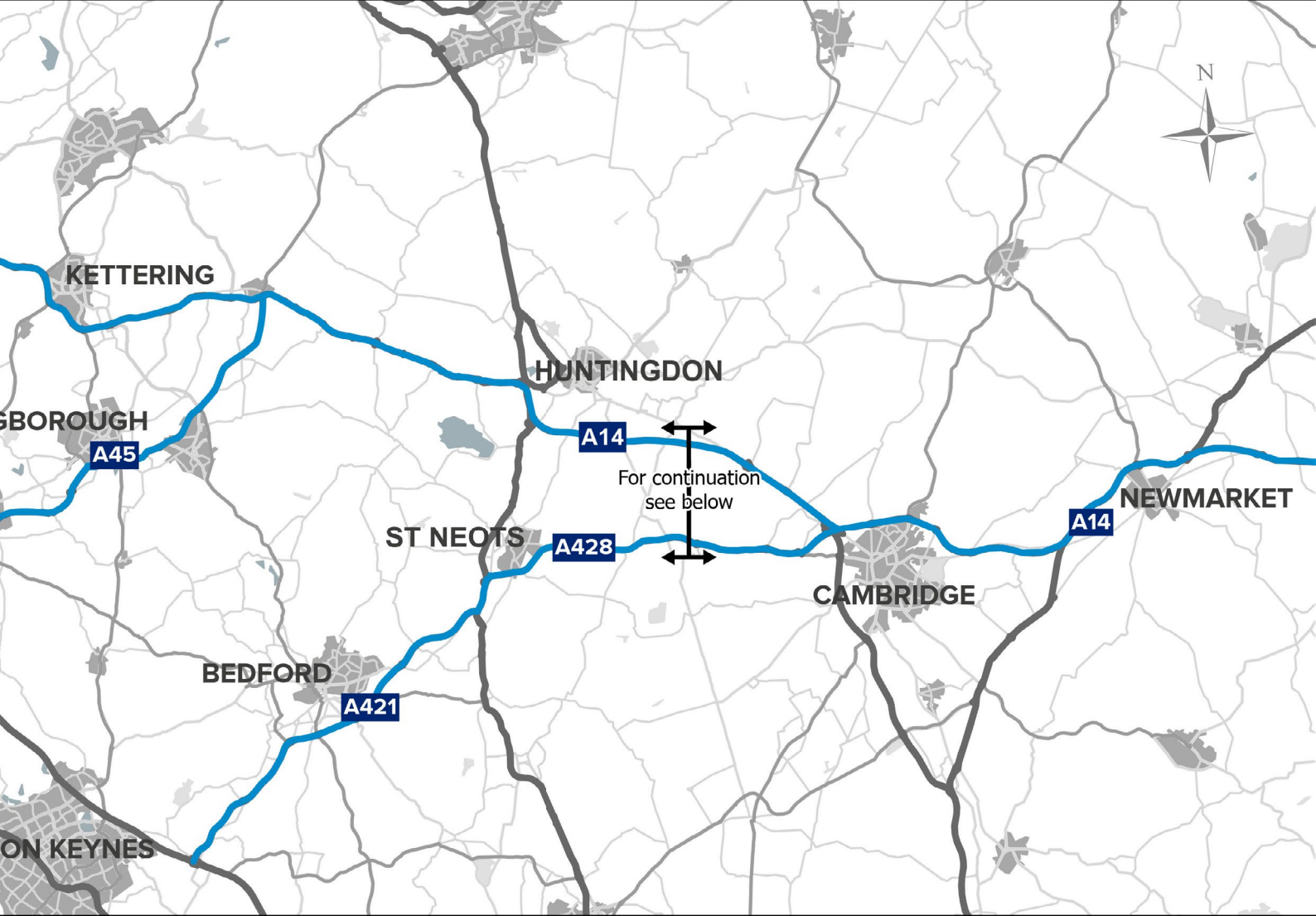


Figure 10: The route

- Felixstowe to Midlands route
- SRN
- MRN
- Local roads





**Listening  
to your  
feedback**

# 03 Engagement with customers and neighbours

Engagement with customers and neighbours has been central to developing our route strategies. The development of the route strategies is one of the key steps of initial research in the development of the Road investment strategy (RIS). This engagement, together with data analysis, will inform RIS3 (2025 to 2030) and beyond. It builds on a wealth of evidence from previous route strategies and our ongoing monitoring of road condition and performance.

## Engagement with customers and neighbours in the Felixstowe to Midlands corridor

Early engagement with the Department for Transport (DfT), Office of Rail and Road, Transport Focus, Midlands Connect and Western Gateway Sub-national Transport Bodies and Network Rail shaped our engagement with customers and neighbours in the Felixstowe to Midlands corridor. We gathered evidence from a cross-section of Members of Parliament (MPs), interested parties, road users and communities at a route level to understand their needs for the future. This built on engagement that had taken place with national interested parties, such as environmental groups, organisations representing road users, business organisations and transport campaigning groups. This engagement has informed the development of the route objectives.

Engagement took place through:

**MP roundtables:** MPs were invited to a regional roundtable with the Roads Minister to share their views on priorities for our customers and neighbours within their constituencies.

**Regional workshops:** As part of a programme of workshops with interested parties at a national and regional level, we invited interested parties to workshops on route strategies for the Felixstowe to Midlands route in late 2021. Attendees included local authorities, airports and port authorities, transport operators, and other key route-based interested parties, such as major businesses.

We designed the workshops to seek views on both current and future challenges and opportunities for the strategic road network (SRN), in relation to the DfT's six strategic objectives. Views were sought on how the routes interacted with the major road network (MRN), local roads, public transport, walking and cycling, and links to the wider SRN. Interested parties also provided insight into key growth proposals and locations along the route, including committed and emerging economic and housing growth and infrastructure proposals. Interested parties shared their own data, studies and observations of the route area.

### **Route strategies online feedback form:**

Local interested parties, road users and communities were invited to give their feedback on specific locations on motorways and A-roads and routes, and general comments on the road network, through the route strategies online feedback form. For the Felixstowe to Midlands route, regional interested parties were invited to workshops or to use the online form to share their views and feedback.

The information gathered was a mix of evidence, studies and personal experience. All the evidence gathered through these engagement methods was considered alongside route analysis and data to inform the development of the route objectives. The evidence was supplemented by route-based information from Transport Focus' *Strategic Road User Survey*<sup>16</sup> to gain an understanding of the breadth of feedback

## Key themes from engagement

We have drawn out the common themes that emerged from our engagement with our customers and neighbours on the Felixstowe to Midlands route to inform our route objectives. The themes have been aligned with the DfT's six strategic objectives:

### i) Views on: Improving safety for all

- Safety concerns over the number of at-grade junctions on the dual carriageway section of the A14 between Ellington and Thrapston
- Congestion issues are causing online queuing at A11/A14 Junction and Copdock interchange

### ii) Views on: Network performance

- Major capacity constraints resulting from single carriageway sections
- Improved connectivity as a key east-west route for freight
- Improved resilience of the network around safety, and congestion

- Limited access junctions, which do not allow certain movements. This causes issues on the MRN and local road network. These are:

1. M1/M6 Catthorpe Junction discussed in the Route Strategies Engagement Workshop session
2. A11/A14 Junction 38 has been raised by interested parties
3. Girton Interchange, Junction 31, Cambridge, with its limited allowable movements has also been raised as a factor causing congestion on local roads

### iii) Views on: Improved environmental outcomes

- Improved connectivity as a key east-west route for freight Improved resilience of the network around flooding
- Ensure the network responds to net zero carbon and environmental ambitions
- Consider need for future greener energy provision from electric vehicle charging points, solar panels, wind turbines and green hydrogen production

<sup>16</sup> Transport Focus, 2022, *Transport Focus Website*, <https://www.transportfocus.org.uk/insight/strategic-roads-user-survey>

**iv) Views on: Growing the economy**

- The need to improve connections to the international gateways of Felixstowe and Harwich
- Improved connectivity for rural communities to support economic growth and to address seasonal visitor economy traffic
- Greater provision needed for additional HGV parking and freight facilities
- Greater preparation for future proofing of network as a result of changes in travel behaviour
- SRN needs to be responsive to and take account of major growth expectations
- Where network is close to capacity it is impacting the ability to cater for growth in homes and employment

**v) Views on: Managing and planning the SRN for the future**

- Junction improvements that address current congestion and Local Plan growth should be future proofed

**vi) Views on: A technology-enabled network**

- Install technology across the route particularly the A14 and A45
- Improve communication with local Highway Authorities regarding information signage provision and real time information/ network management at locations such as the Coventry junctions on the M6
- Expand Electric Vehicle Charging infrastructure to cater adequately for longer distance trips

### Engagement quotes from customers and neighbours



Figure 11: Quotes from customers and neighbours



“Opportunities to deliver significant improvements in technology now and as part of a new scheme”

(Route Strategies Engagement)

Data sharing to better manage traffic across both local and strategic road networks”

(Route Strategies Engagement)

“Better provision needed for lorry parking and facilities which can impact safety and also contributes to driver shortage to the detriment of the national economy”

(Route Strategies Engagement)

“Prepare for alternative fuels”

(Route Strategies Engagement)

“The journey was twice as quick as I was expecting. I haven’t been to Peterborough since the A14 was re done here.”

(Transport Focus SRUS)

“Congestion issues south of Bedford are increasingly restricting potential growth”

(Route Strategies Engagement)“

“A428 Black Cat to Caxton Gibbett. Good opportunity for performance improvement plus active travel, public transport and intermodal transport via East-West Rail station”

(Route Strategies Engagement)

“The absence of a link M6 southbound to M1 northbound at M1 Junction 19 and M1 southbound to M6 northbound now contributing to delays at A426/A5 Gibbet roundabout and extra traffic through Lutterworth and local villages”

(Route Strategies Engagement)

## Route satisfaction

Satisfaction scores have been obtained from Transport Focus through their Strategic Roads User Satisfaction Survey from the last 12 months to May 2022. It covers the roads in this route but it should be noted that the satisfaction scores may not fully align with the extent of the roads in the route. Figure 12 shows how satisfied drivers were with aspects of their journey and how they felt during their journey.

Additional comments and data from the Transport Focus survey of drivers on the SRN can be found on the Transport Focus website data hub<sup>17</sup>.

The engagement themes and feedback from MPs, interested parties, road users and communities has been considered as part of the wider analysis in Chapter 5.

### Strategic roads user survey satisfaction scores

The survey was not run between April 2020 and March 2021 due to COVID-19. It restarted in April 2021 with a new methodology, so results prior to March 2020 and from April 2021 are not directly comparable.



National Highways Region East,  
 Midlands National Highways Area 6 & 8,  
 Individual road: A14, A45, A421, A428  
 Last 12 months\*\*\* May 2022 (last 12 months)

\*\* Before March 2019 and from April 2021 to February 2022 this is year-to-date, not past 12 months

Figure 12: Satisfaction scores from headline results

<sup>17</sup> Transport Focus (2022) *Transport Focus Website*. <https://transportfocusdatahub.org.uk/>





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Ipswich Docks traffic  
Cliff Quay

Westbank Terminal

Working with our partners

**ZIM**

ZCSU 276681 8  
42G1

MAX. GROSS	32,500 kg
	71,650 lbs
TARE	3,720 kg
	8,200 lbs
MAX. CARGO	28,780 kg
	63,450 lbs
CU. CAP.	87.5 cu.m
	2,984 cu.ft.

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TURNERS T.3863

# 04 Network collaboration

The strategic road network (SRN) does not exist in isolation. Most journeys on the SRN are part of a longer journey, involving other road networks or different transport modes.

To deliver safe and efficient journeys for our customers and to support economic and housing growth, at National Highways we have built relationships with other organisations to ensure the SRN maximises its contribution to the overall transport system, which includes local roads, rail networks, links with the devolved nations and international connectivity. We work with other network operators (such as Network Rail), airports and ports, Sub-national Transport Bodies, Transport for Wales and Transport Scotland, as well as combined authorities and local highway authorities. This is in line with National Highways' Licence requirements to consider opportunities for collaborative solutions where funding is secured. We recognise that joint early planning of interventions outside our network will ultimately improve the SRN and deliver greater benefit to the customer than could be achieved alone, where this delivers value for money.

## An integrated transport network

Route strategies recognise the role that the SRN plays within the wider transport network. In planning for the future of the SRN, we recognise the importance of working closely with other network planners and operators to ensure our transport networks work well together, and that our investment priorities are aligned where possible.

Sub-national Transport Bodies have a key role in their regions in creating transport strategy and identifying key areas for investment, including for highways. There are seven such bodies in England, who are tasked with developing transport strategies and studies for their particular area.

Through the collection of evidence with their local authorities and Local Enterprise Partnerships, their work highlights multimodal issues, needs and opportunities. A list of potential interventions for transport are then provided to the Secretary of State for Transport, including where to prioritise investment in the major road network (MRN). We work closely with the Sub-national Transport Bodies on interdependencies and align our approaches where possible. The Sub-national Transport Bodies that cover the route are:

- England's Economic Heartland
- Transport East
- Midlands Connect

National Highways and Sub-national Transport Bodies have worked together to develop an engagement framework. The need for closer working was highlighted as a priority in *DfT's Road investment strategy*<sup>18</sup>, and within our *Strategic business plan*<sup>19</sup> and *Delivery plan*<sup>20</sup>. It enables National Highways and Sub-national Transport Bodies to work together to achieve mutually beneficial outcomes for transport users, regional economies and the environment. Our Approach to Engagement document sets out a shared commitment for a continued open, constructive and collaborative relationship. This is supported by engagement and action plans for each Sub-national Transport Body, which are proving instrumental in ensuring consistency and transparency in the information we share. The plans are monitored and reviewed regularly, with annual reviews occurring ahead of each new financial year.

At a more local level we also work with local authorities, who are the highway authorities for local roads, including those on the MRN.

<sup>18</sup> Department for Transport, *Road Investment Strategy 2: 2020 - 2025*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/951100/road-investment-strategy-2-2020-2025.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951100/road-investment-strategy-2-2020-2025.pdf)

<sup>19</sup> National Highways, *Strategic Business Plan: 2020 – 2025*, <https://nationalhighways.co.uk/strategic-business-plan/>

<sup>20</sup> National Highways, *Delivery Plan: 2020 – 2025*, <https://nationalhighways.co.uk/delivery-plan/>

This collaboration ranges from operational matters to more strategic issues to ensure that the overall highway network operates safely, efficiently and effectively, providing high quality and seamless customer journeys. The local authority planning teams work closely with our spatial planning teams. In enabling new employment spaces and homes to be developed, we engage fully as a statutory consultee in the planning system and the evidence collected through the route strategies will support this decision making.

### England's Economic Heartland

England's Economic Heartland (EEH) published its' regional transport strategy, *Connecting People, Transforming Journeys*<sup>21</sup>, in 2020. The strategy outlines the framework for enabling green economic growth, in a way that also creates a net zero transport network. The strategy further details the importance of working with partners, Local Growth Boards and national initiatives, including the Oxford to Cambridge Arc. The four EEH priorities are:

- Achieving net zero carbon emissions from transport no later than 2050, with an ambition to do so by 2040
- Improving quality of life and wellbeing through a safe and inclusive transport system, which is accessible to all and emphasises sustainable and active travel
- Supporting the regional economy by connecting people and businesses to markets and opportunities
- Ensuring the Heartland works for the UK by enabling the efficient movement of people and goods through the region and to and from international gateways, in a way which lessens its environmental impact

These strategic priorities set out how the region can reduce reliance on private car usage by creating better connectivity within communities. It also details how the Heartland will work to harness leading expertise in clean, green and smart technologies, allowing the region to have a competitive edge in global markets.

Whilst the transport strategy is ambitious, it aims to deliver the EEH vision of supporting sustainable growth and improving the quality of life through a decarbonised transport network. This will encourage innovation and create further opportunities for local residents and the local economy, whilst also benefitting the national and international economy.

### Transport East

Transport East published its' Draft transport strategy in November 2021<sup>22</sup>. It aims to overcome some of the transport challenges experienced by delivering a fit for purpose, high quality inclusive and sustainable transport network that will be able to accommodate future growth in the area. Transport East's vision is: "A thriving economy for the East, with fast, safe, reliable and resilient transport infrastructure driving forward a future of inclusive and sustainable growth for decades to come."

There are four strategic priorities to deliver this vision:

- **Decarbonisation to net zero** - Working to achieve net zero carbon emissions from transport, building on the region's status as the UK's premier renewable energy region
- **Connecting growing towns and cities** - Providing enhanced links between our fastest growing places and business clusters, improving access for people to jobs, suppliers, services and learning, enabling the area to function as a coherent economy, and improving productivity

<sup>21</sup> [https://www.englandseconomicheartland.com/documents/405/Connecting\\_People\\_Transforming\\_Journeys\\_av.pdf](https://www.englandseconomicheartland.com/documents/405/Connecting_People_Transforming_Journeys_av.pdf)

<sup>22</sup> <https://www.transporteast.org.uk/wp-content/uploads/A-30-year-transport-strategy-for-the-East-UPDATED.pdf>

- **Energising coastal and rural communities**

- A reinvented sustainable coast for the 21st century that powers the UK through energy generation. Supporting the region's productive rural communities and attracting visitors all year round

- **Unlocking international gateways -**

Better connected ports and airports to help UK help businesses thrive, boosting the nation's economy through better access to international markets and facilitating foreign investment

Six core corridors have been identified, which are the road and rail links between the region and the rest of the UK.

### Midlands Connect

Midlands Connect is the Sub-national Transport Body for the Midlands and is the transport arm of Midlands Engine (which acts as a focal point to drive economic growth in the region). It is a partnership of local authorities, Chambers of Commerce, Local Enterprise Partnerships, national agencies and airports.

Midlands Connect published its first Strategy in 2017<sup>23</sup>, and since then it has researched, developed and progressed transport schemes designed to deliver social, economic and environmental benefits. The Strategy was refreshed in 2022. The new Strategic Transport Plan 'Fairer, Greener, Stronger'<sup>23</sup> sets out an investment programme that improves strategic connectivity between the East and West Midlands, to neighbouring regions and to Wales.

This strategic investment will be complemented by improvements to local connectivity made by local authorities and regional economic growth plans from the Midlands Engine.

Midlands Connect has identified three grand challenges that strategic transport investment must help tackle to achieve its vision of a fairer, greener and stronger Midlands:

1. Fairer: Levelling up and strengthening the region and UK. Being ready for HS2; enhancing quality of life; and integrating transport networks
2. Adapting to climate change. Contributing to achieving 'Net Zero' by 2050; ensuring resilient networks; and minimising the environmental impacts of new infrastructure
3. Stronger: Driving resilient economic growth. Providing fast and reliable transport connections; and enabling population and employment growth

The Plan sets out five priorities to improve regional connectivity:

- Aspirations for rail
- A future road network that is reliable, resilient and efficient for all
- Helping to move goods
- Responding to transport challenges in rural areas
- Maximising technology-related opportunities to improve connectivity

In terms of roads, Midlands Connect is seeking investment to improve the service to users of the SRN and MRN, make best use of technology and help to accelerate use of electric cars and alternatively fuelled goods vehicles, and to futureproof roads against the impacts of climate change and to protect the environment.

Midlands Connect has undertaken studies on a number of important trade and logistics corridors that, if enhanced, could catalyse business growth, boost productivity and support the development of new housing and export markets.

<sup>23</sup> <https://www.midlandsconnect.uk/strategy/>

Through these studies, Midlands Connect has identified eleven priority locations for investment during the third and fourth road periods (2025 - 2035) where the SRN needs to 'work harder'. In most cases, specific solutions for these locations have not been identified, with multimodal solutions expected to be considered.

The priority location identified on this route is the A45 Stanwick to Thrapston upgrade.

## Interaction with the major road network and local roads

The Major Road Network (MRN) is the middle tier of England's road network, comprising the busiest and most economically important local authority A-roads. It is key to supporting the economic vitality of England, particularly with its role, along with the SRN, of delivering 'first and last mile' connections and onward journeys. It acts as a connecting spine for the SRN, with one of the objectives in establishing the MRN being to support the SRN through improving journeys across both networks. The MRN represents the roads that our partners in local authorities and Sub-national Transport Bodies see as being strategically most important, along with the SRN.

The relationship between the SRN and MRN is complex. The two networks connect people with economically important locations across England, as well as providing resilience for each other. Interventions on one network can also significantly influence travel behaviours on the other. Most SRN journeys involve elements of both networks.

It is therefore important that decisions about the SRN, MRN and other local roads are made in a joined-up way to ensure that the networks are consistent, coherent and complementary. We recognise that the key to the success of the Road Investment Strategy is ensuring the impacts of any interventions are appropriately considered across all networks as well as at their junctions. Both networks play a key role in customers' journeys, and they expect a seamless transition between the two. We are continually seeking to identify collaborative solutions that meet our obligations under the National Highways Licence to improve network performance and provide integration benefits. In developing the route strategies, we aim to ensure the planning for the SRN, MRN and other local roads is complementary.



On the A14 starting from Felixstowe, the notable interactions with the MRN are as follows:

- A140 connects at Needham Market to Diss and Norwich. At Newmarket there is a link to Ely and Chatteris
- A10 at Cambridge, north to Ely and King's Lynn
- A605 at Thrapston connects with Peterborough
- A509 at Kettering to Wellingborough to the south and also the A43 north to Corby and Stamford
- A6 at Rothwell to Leicester
- A426 to Rugby from M6 Junction 1
- A4600 to Coventry from M6 Junctions 2 and 3

The A45 interacts with the MRN at the following locations:

- At Chowns Mill roundabout in Irthlingborough there are connections with the A6 south to Bedford
- At Irchester the A509 provides a link southwards to Olney and Milton Keynes
- At Northampton the A45 connects via the A43 to Kettering and the A428 to Bedford

On the A421 at Bedford, there is a connection to the M1 southbound via the A603, whilst Luton is also connected via the A6.

## Freight and logistics

*The Future of Freight: a long-term plan* (DfT June 2022)<sup>24</sup> sets out priorities for the UK's freight industry. It recognises that in 2019 the sector contributed 10% of the UK non-financial business economy and £127 billion gross value added (GVA) through more than 200,000 enterprises, noting that, with imports and exports comprising 63% of GDP in 2019, we are reliant on the freight and logistics sector for our economic wellbeing.

The A14 has much higher than average use by heavy goods vehicles (HGVs), with between 21% and 25% of total miles travelled compared to the average of 11% for East of England trunk roads. Given this and the importance of the route for international trade at the Port of Felixstowe, lorry rest areas are important both for safety and for economy. The route also bisects the 'Golden Triangle of Logistics', where logistics activity is the most concentrated. This is an area of the Midlands bounded by the M1, M6 and M42 motorways as far west as Birmingham, as far north as Nottingham and south east to Bedford.

<sup>24</sup> Department for Transport, 2022, *Future of Freight: a long-term plan*, Department for Transport  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1085917/future-of-freight-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1085917/future-of-freight-plan.pdf)

This is situated in an area where most HGV drivers can reach in their working day, and is also in reach of the ports in terms of allowed driving time, after which a break is legally required. As a result, there is a particularly high demand for rest areas in this region.

There is generally a critically low level of lorry parking provision on the Felixstowe to Midlands route (A14). Freight generators on the route include the UK's largest container port at Felixstowe and the roll-on roll-off port at Harwich, which is linked to key industrial clusters in the Midlands and set to become part of Freeport East. There is also demand generated to and from urban and industrial areas, such as Cambridge, Northampton (including Brackmills Industrial Estate, linked by the A45) and Milton Keynes (linked by the A428/A421). Positive news included the opening by Welcome Break of the Rothwell Lorry park near Kettering in 2019, creating 221 new spaces. Kettering Council has a pragmatic attitude to the need for lorry parking and has recognised there could be a need for three new lorry parks in Northamptonshire. It is also important to note that the Development Consent Order for Northampton Gateway SRFI was granted in October 2019, which will bring extra freight traffic to that location. On the negative side, the closure of the Orwell Crossing lorry park in 2021, with its 150 spaces and one of the closest parks to the Port of Felixstowe, is creating a capacity issue in Suffolk as in peak times there are insufficient other lorry parking sites within legal driving time to absorb demand.

The National survey of lorry parking published by the Department of Transport in 2018<sup>25</sup> showed that utilisation of on-site lorry parking reached 97% in the East of England Region, which covers the eastern half of this route. This was the highest utilisation of all of the English regions. The West Midlands region at 87% was still above the 85% threshold whereby they can be considered to be at "critically full utilisation" in a practical sense.

Such lack of capacity leads inevitably to off-site parking at locations on routes and sites not designed for this purpose, creating lorry movements away from the SRN. The study showed that the area between Thrapston on the A14 and the M1, and also the M6, shows a "high" offsite density area of such use. The A14 was also singled out in the study as a particular area of HGV parking shortage.

## Diversions routes

To operate a resilient road network, we need to be able to effectively divert traffic off the SRN in the event of unplanned incidents (such as collisions or emergency roadworks), or as part of planned closures (such as planned improvement schemes). The MRN, along with the rest of the Local Road Network, supports the SRN as diversion routes during these events.

We have agreed diversion routes for emergency events with local authorities. Diversion routes for planned events are discussed and agreed with local authorities on a case-by-case basis. These routes are dependent upon the nature of the incident, and the suitability and availability of the surrounding network. In some cases, the diversion route may not be suitable for certain types of traffic, such as heavy goods vehicles (HGVs), or non-motorway traffic, such as cycles and tractors. In other cases, diversionary routes may not be available due to events on the Local Road Network. We work closely with local authorities to ensure that suitable diversion routes are available.

The A14 diversion route from Felixstowe to Ipswich is via the single carriageway northern section of the ring road (A1156 and A1214), which runs through the urban area. It has frequent roundabouts that cause long queues and delays to local traffic. Similarly, the diversion route in the Bury St Edmunds area is through the town. For Huntingdon it is the old alignment of the A14 which was recently relieved by the recently opened A14 Cambridge to Huntingdon improvement scheme on a new alignment.

<sup>25</sup> Department for Transport, 2018, *National Lorry Park Survey*, Department for Transport [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/723349/national-survey-of-lorry-parking-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/723349/national-survey-of-lorry-parking-report.pdf)

Some sections, such as from Ellington to Thrapston, when closed would lead to lengthy diversions via the A1(M) to just south of Peterborough and then onto the A605. Finally, for the A14 there are diversions in Kettering through the busy urban areas of the town.

For the A428 the diversion route from Cambridge to Black Cat would be via the A14 and the A1(M). For the A45 the diversion route runs via Wellingborough and Kettering.

## Network Rail and other network operators

The SRN plays an important role in the movement of passengers and freight across England, and it needs to be considered alongside the wider transport network. The rail network is also important in moving freight and people over longer distances and helping commuters travel into congested cities. Better integration between road and rail can help to transfer more journeys onto rail. This can help to relieve congestion on the SRN, as well as improve the environment by increasing the use of more sustainable transport modes.

At a strategic level we work closely with Network Rail and train operators to find opportunities to better integrate the two networks to benefit the movement of freight and people. This involves seeking opportunities to place rail stations in strategically important locations with easy access to the SRN.

The *Network Rail strategy*<sup>26</sup> presents a vision of “putting passengers and freight users first”. This Strategy recognises that Network Rail can improve the daily lives of people across the country by striving to constantly improve the quality of its service across the whole railway system. Network Rail delivers its vision through a regional structure committed to responding to the needs of local customers and interested parties, more quickly than if such decisions were to be made at a national level.

The Ipswich to Felixstowe branch line, which is substantially single track with passing loops, has had capacity improvements recently. This is in the form of selective doubling and the installation of an extra loop which now allows 40 freight trains to run in each direction. The railway line between Ipswich and Newmarket runs roughly parallel to the A14. It divides just before Newmarket, offering an hourly passenger service to Cambridge and to Peterborough approximately every two hours.

The *Ely Area Capacity Enhancement Programme*<sup>27</sup> is set to improve this constraint point on the rail network and allow more trains through. This is particularly important for rail freight container traffic moving from the Port of Felixstowe to the Midlands and beyond, for which this is the preferred and quickest route.

Beyond Cambridge there are no rail routes that parallel the A14. The road serves as the main connection between towns and cities such as Cambridge, Huntingdon, Kettering and Coventry. Our route strategies understand the key role the SRN plays in providing access to and from these places.

At National Highways, we also work with the operators and promoters of urban rapid transit systems, identifying where there are opportunities for better integration. This includes looking at the possibility of creating new park and ride sites, including on the new East West Rail project between Oxford and Cambridge via Milton Keynes and Bedford. The first section to Bletchley is currently being constructed, with the remaining section to Cambridge at the detailed planning stage.

<sup>26</sup> Network Rail, *Our delivery plan for 2019 – 2024*, <https://www.networkrail.co.uk/who-we-are/publications-and-resources/our-delivery-plan-for-2019-2024/>

<sup>27</sup> <https://www.networkrail.co.uk/running-the-railway/our-routes/anglia/improving-the-railway-in-anglia/ely-area-capacity-enhancement/>

There are currently no direct rail services on the A428 corridor between Cambridge, St Neots and Bedford, or on the A45 between Thrapston, Rushden, Wellingborough and Northampton, where all connections are effectively road based.

We also work with the operators and promoters of urban rapid transit systems where there are opportunities for better integration. For example, through the creation of park and ride sites to remove traffic from the road network.

## Strategic connectivity

The SRN plays a key social and economic role in connecting England with the devolved authorities of the UK, particularly Wales and Scotland, but also, via ports, Northern Ireland. We work closely with Transport for Wales and Transport Scotland to ensure our key cross-border routes are joined up effectively with those in Wales and Scotland to ensure easy journeys for our customers.

Along the Felixstowe to Midlands route, the A14 is the main artery. The A14 also serves as a connection with the north-south A1(M) to the North, which is covered by the London to Leeds (East) route, and at the M6 Junction 19 with the M1 on the London to Scotland (East) route. The A12 north connects to the A14 south of Ipswich and provides access to the Suffolk coast, including Sizewell C nuclear power station and the growing windfarm industry. The A12 in the south connects to the A14 east of Ipswich, providing access to Harwich (part of Freeport East) and southeast towards London. The A12 south of Ipswich is covered by the East of England Route Strategy.

The A421 connects the A14 to Milton Keynes and southern access to the M1. These are important routes for both passengers and freight, and the SRN is considered within this broader context.

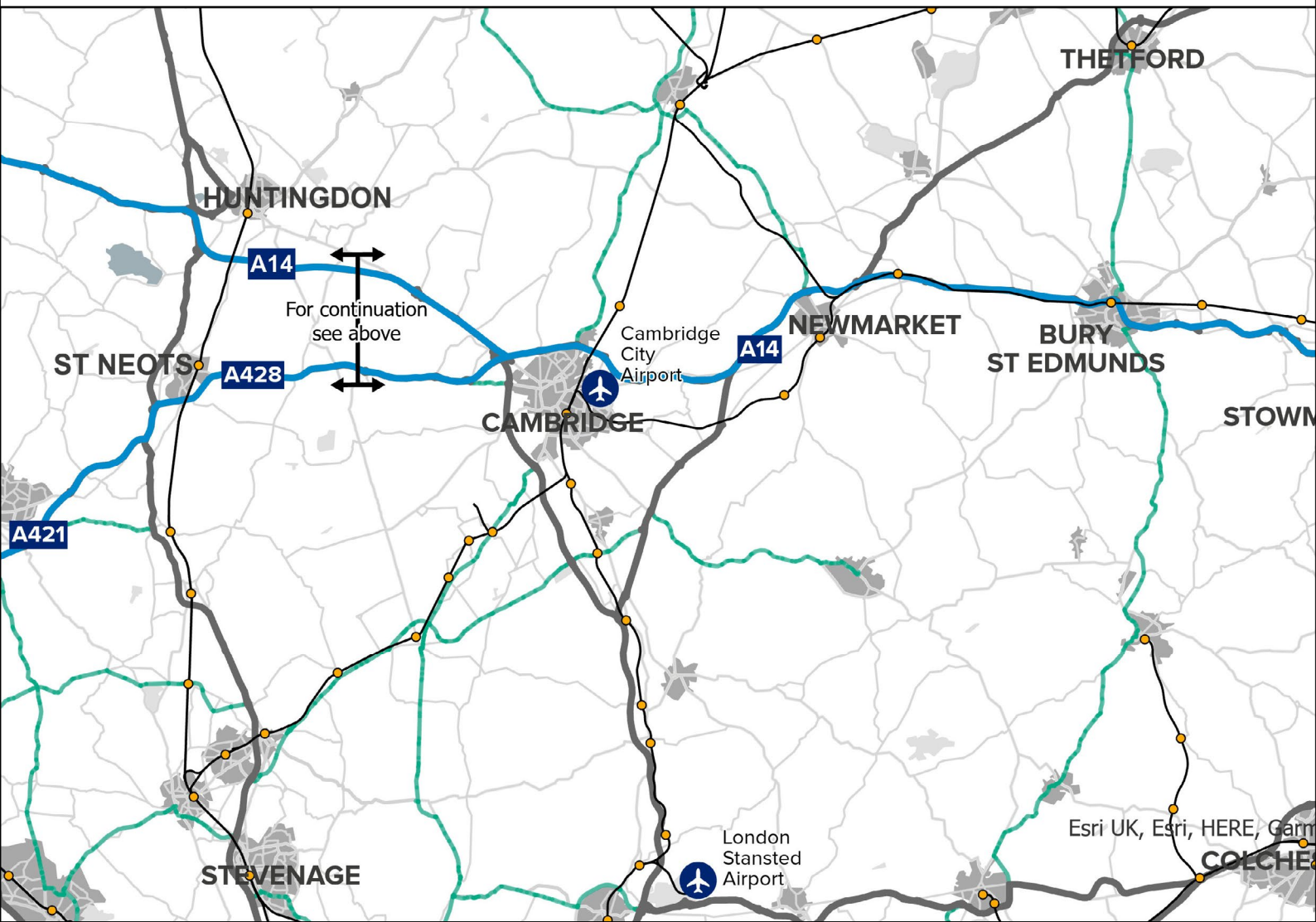
## International connectivity

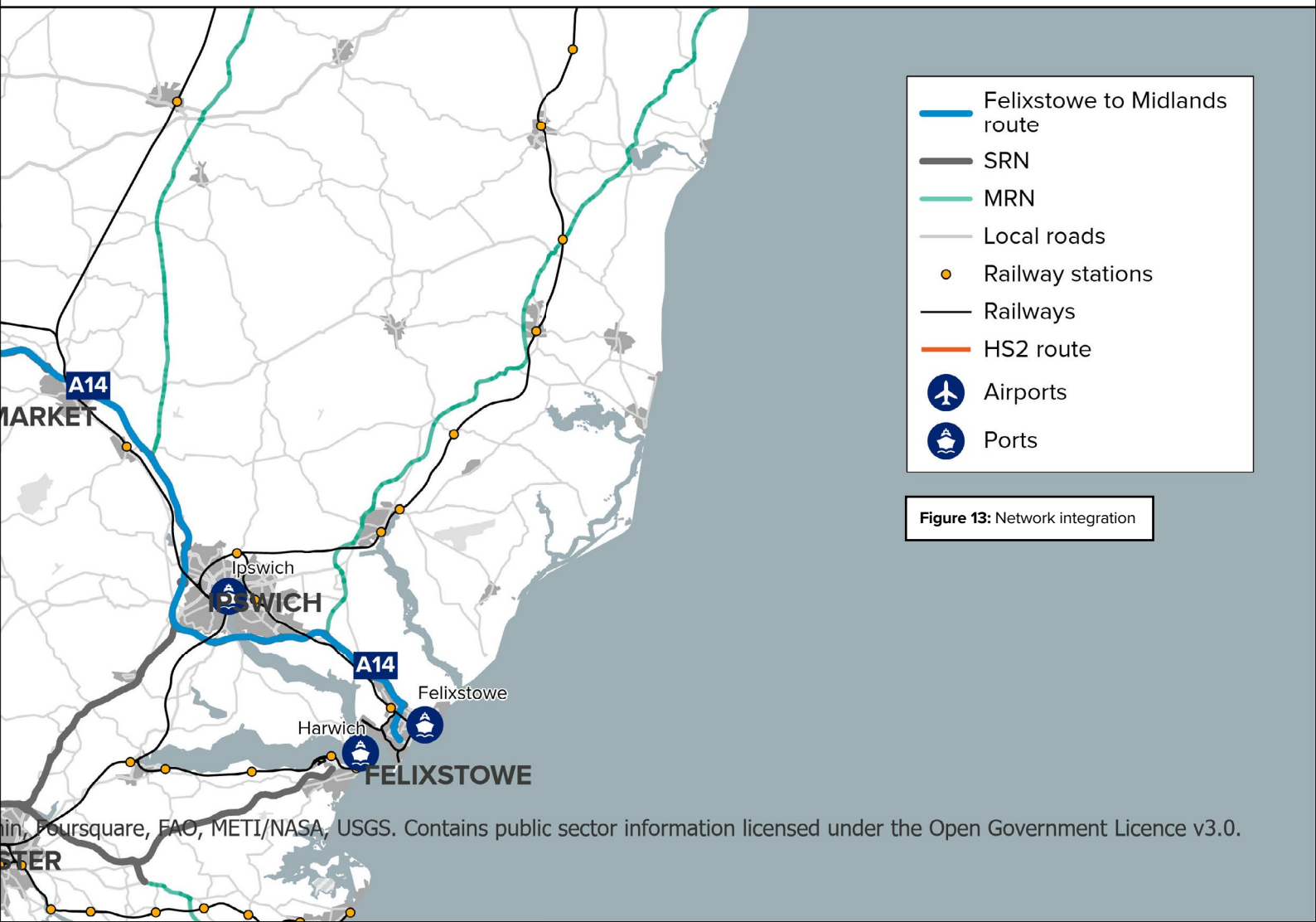
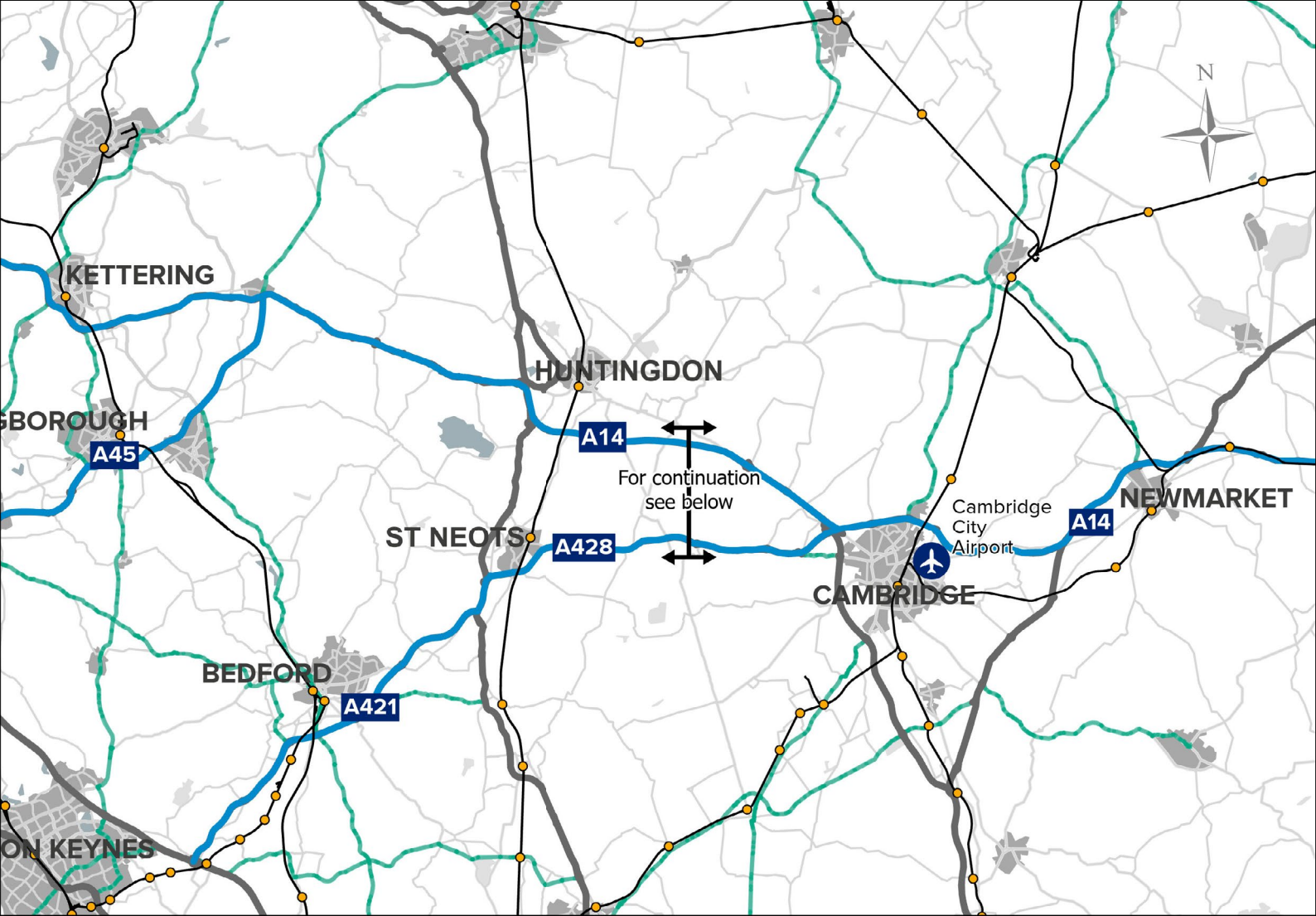
One of the objectives of the SRN is to support the important economic activity involved in international passenger and freight movement via good connections to ports and airports. A key aspect of route strategies is ensuring that future investment continues to support these essential movements.

For the Felixstowe to Midlands route, the A14 needs to be considered not only within the context of the local access and long-distance provision it provides, but also for the connectivity it provides nationally and internationally via the A1 and M6 up to Scotland and through the Ports of Felixstowe and Harwich, for both passengers and freight.

Further afield, the A14 also provides a connection to Northern Ireland via the ports of Liverpool, which can be accessed through the M62, as well as Birkenhead via the M6, M56 and M53, and Cairnryan via the M6 and A75. Connections to North Wales can also be made via the M6 and M54, included in the Midlands to Wales Route Strategy and M6 and M56, included in the South Pennines Route Strategy.









**Challenges  
and issues  
on the route**



# 05 Challenges and issues

We recognise that there are existing challenges and issues on the network and these are outlined against the Department for Transport's six strategic objectives as part of the route strategy evidence base.



## 1. Improving safety for all

The International Road Assessment Programme (iRAP) Star Ratings are based on road inspection data and provide a simple and objective measure of the level of safety which is 'built-in' to the road. The higher the star rating, the safer the road. iRAP Star Ratings are produced for each 100-metre section of road, based on detailed inspections of roadside features as well as traffic flow, speed, pedestrian and cyclist use, and crash data.

iRAP data helps us to predict future risk within a wider Safe System approach. Safe System thinking accepts that humans will make mistakes but considers what is within the scope of our influence to limit the injuries sustained. The iRAP approach to managing future risk complements the more traditional approach of analysing historical incident data provided by STATS19 as a means of predicting future collisions and casualties.

STATS19 data are the statistical data published by the Office for National Statistics about personal-injury road traffic collisions reported to the police. STATS19 remains the most detailed, complete, and reliable single source of information on road casualties covering the whole of Great Britain, in particular for monitoring trends over time.

For the purposes of National Highways Route Strategies, the total fatal and serious injuries are aggregated by the section of road on which they occurred, based on the National Traffic Information Service (NTIS) network.

The NTIS network used for displaying traffic data is the full extent of the roads for which National Highways are the highway authority. The NTIS network is modelled for each side of the carriageway, such that NTIS links are one-directional and split at junctions. The data used only includes main carriageways; slip roads, roundabouts and other types of road are not modelled in this dataset. The length of an NTIS link can vary greatly depending on what part of the network it represents. Use of the NTIS network provides a common geometry which can be used to compare the STATS19 data with network performance and other metric data.

A combination of star ratings and historic data can help us prioritise route treatments. Where the density of incidents resulting in death or serious injury is high, and the star rating is low (poor), it indicates something can be done to prevent future collisions where people are killed or seriously injured.

Road Safety Foundation (RSF) produce maps that show the statistical risk of fatal or serious injury crash occurring. The risk is calculated by comparing the frequency of road crashes that result in death and serious injury with how much traffic each road is carrying. For example, the risk on a road carrying 10,000 vehicles a day with 20 crashes is ten times the risk on a road that has the same number of crashes but which carries 100,000 vehicles.

Using the latest available data it shows that the following sections of the route have the iRAP Star Ratings of 1 or 2:

- Where the route passes through single carriageway sections of the A428 (Caxton Gibbet and St Neots) and the A45 (Thrapston and Rushden)
- Walkers, cyclists and horse riders, particularly on the A14 between Felixstowe and Cambridge.

The Road Safety Foundation collision risk and density data is a calculation of aggregated STATS19 data on Road Safety Foundation routes (of which there are 284 on the SRN) as well as the volume of traffic each road is carrying.

The Road Safety Foundation data we received also included motorcycle collision density and percentage of collisions involving walkers, cyclists and horse riders (WCH). The latest available data shows there are a number of collisions involving walkers, cyclists and horse riders. There was a higher number of fatal and serious motorcycle collisions per mile road length along the A428 and A45, when compared to the rest of the UK. The route passes through or alongside a large number of towns and has numerous foot and cycle path crossings (largely unsignalised).

This has led to a number of collisions involving walkers, cyclists and horse riders, particularly along the A14 between Felixstowe and Cambridge.

STATS19 data shows that there are concentrations of collisions on sections of the route where people were killed or seriously injured – including:

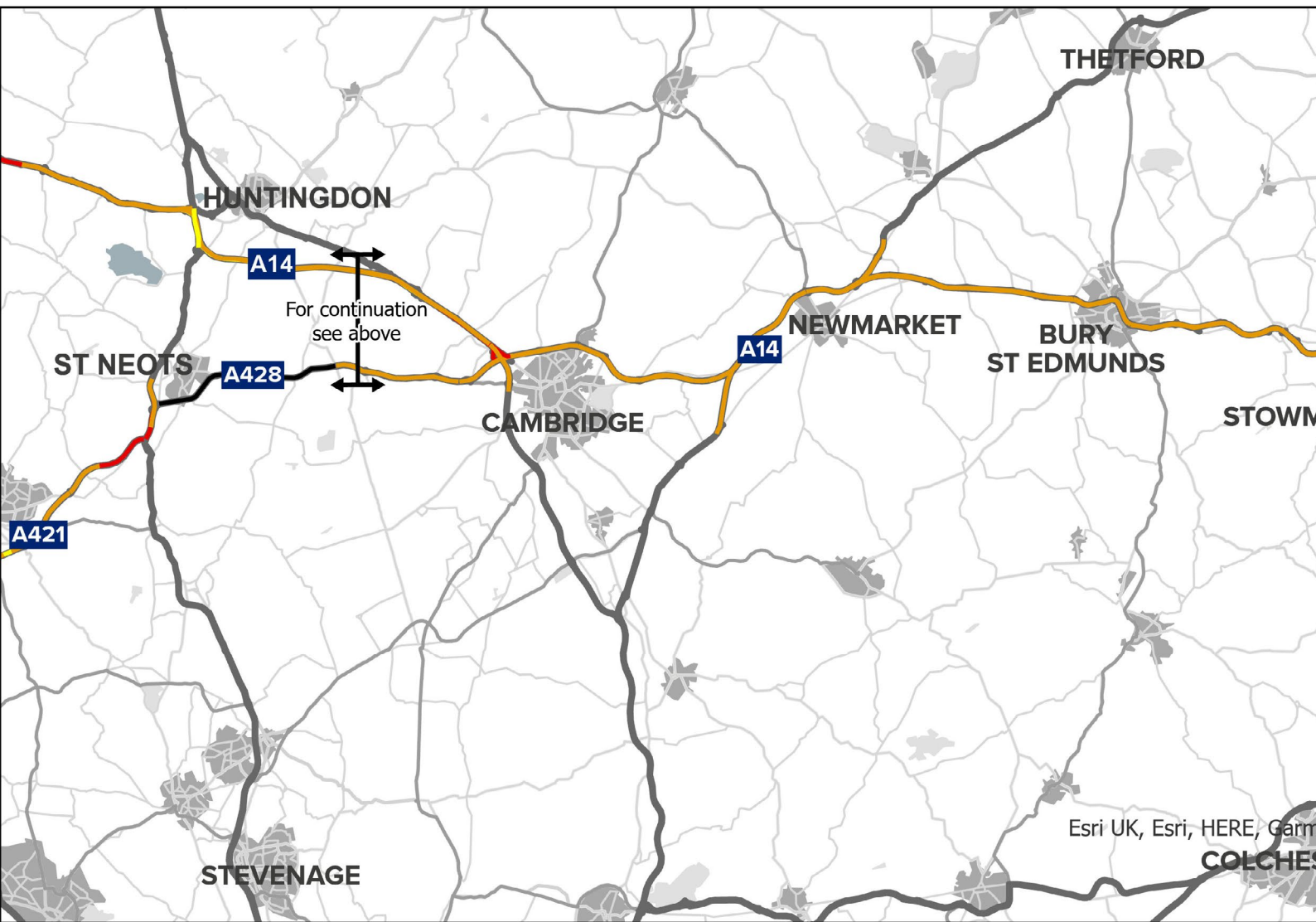
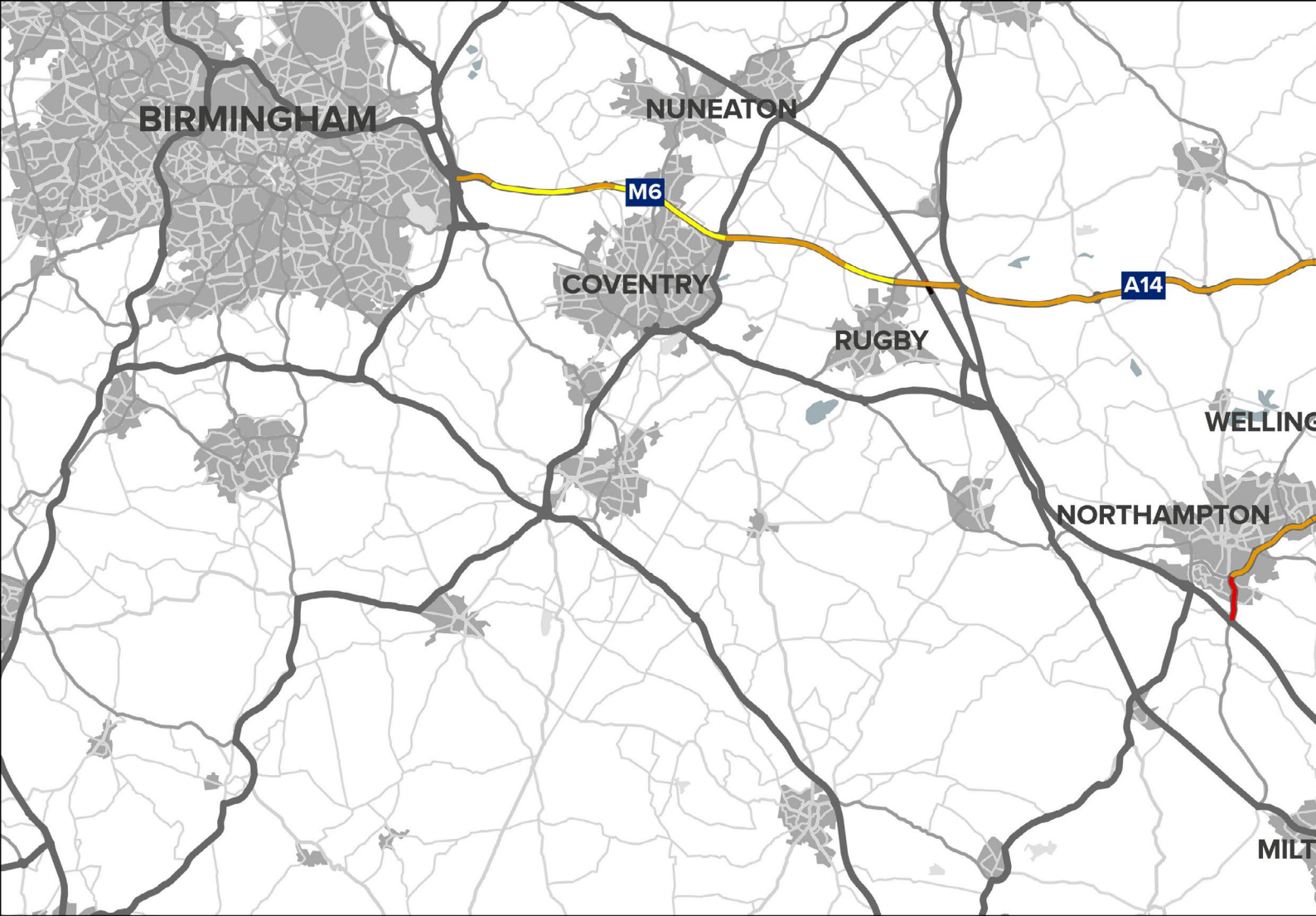
- along sections of the A428 between St Neots and Cambourne
- along sections of the M6 between Rugby and the Birmingham Box at Junction 4
- on sections of the network in proximity

Improving safety and minimising collision rates is a key consideration for all our routes

#### Key challenges

- Concentration of collisions on the remaining single carriageway sections of the route, such as the A428 between Caxton Gibbet and St Neots, and the A45 between Thrapston and Rushden
- Concerns over junctions on the A14 between Ellington and Thrapston raised by communities





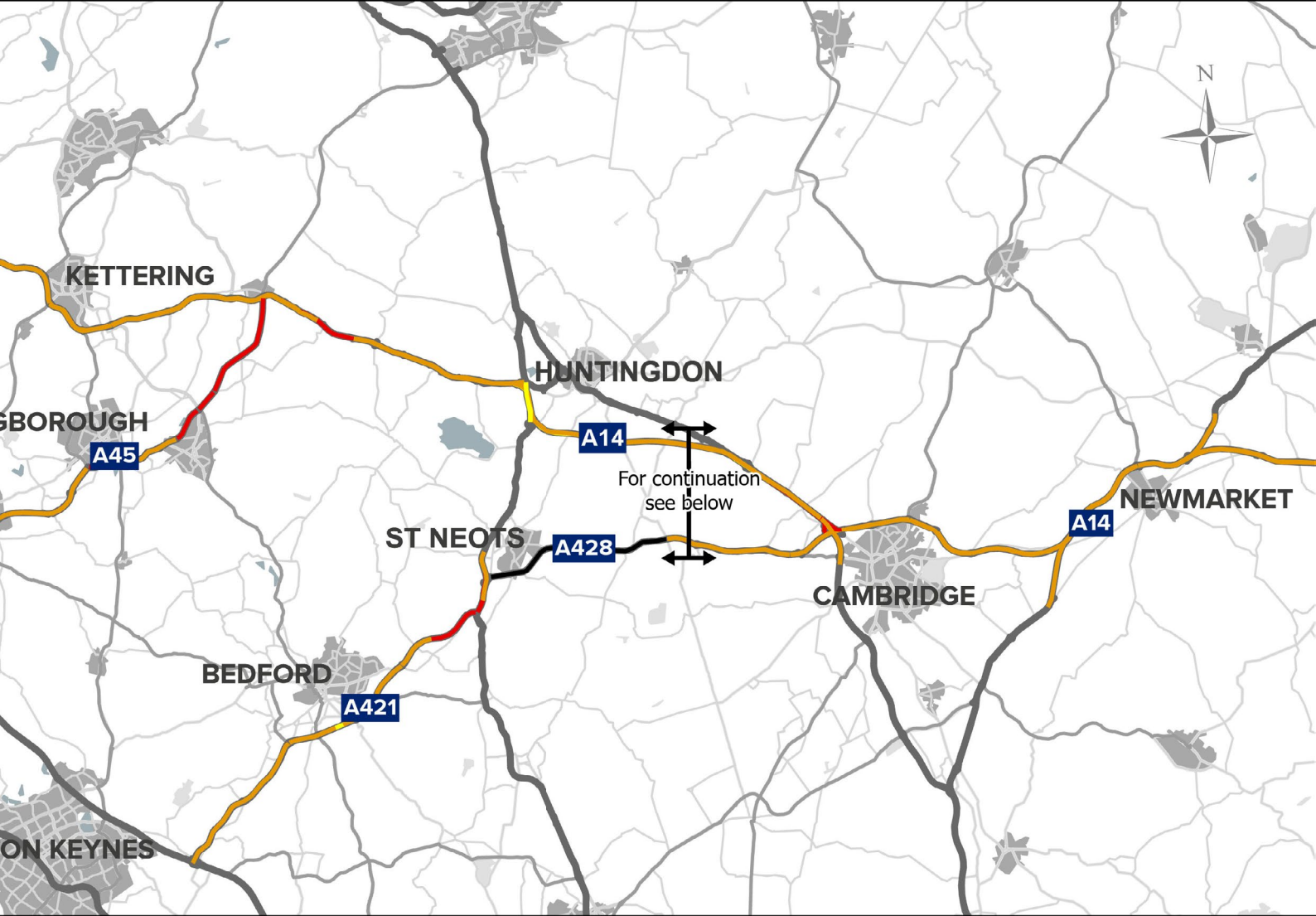
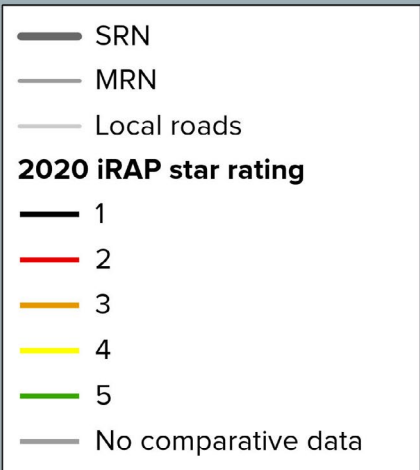
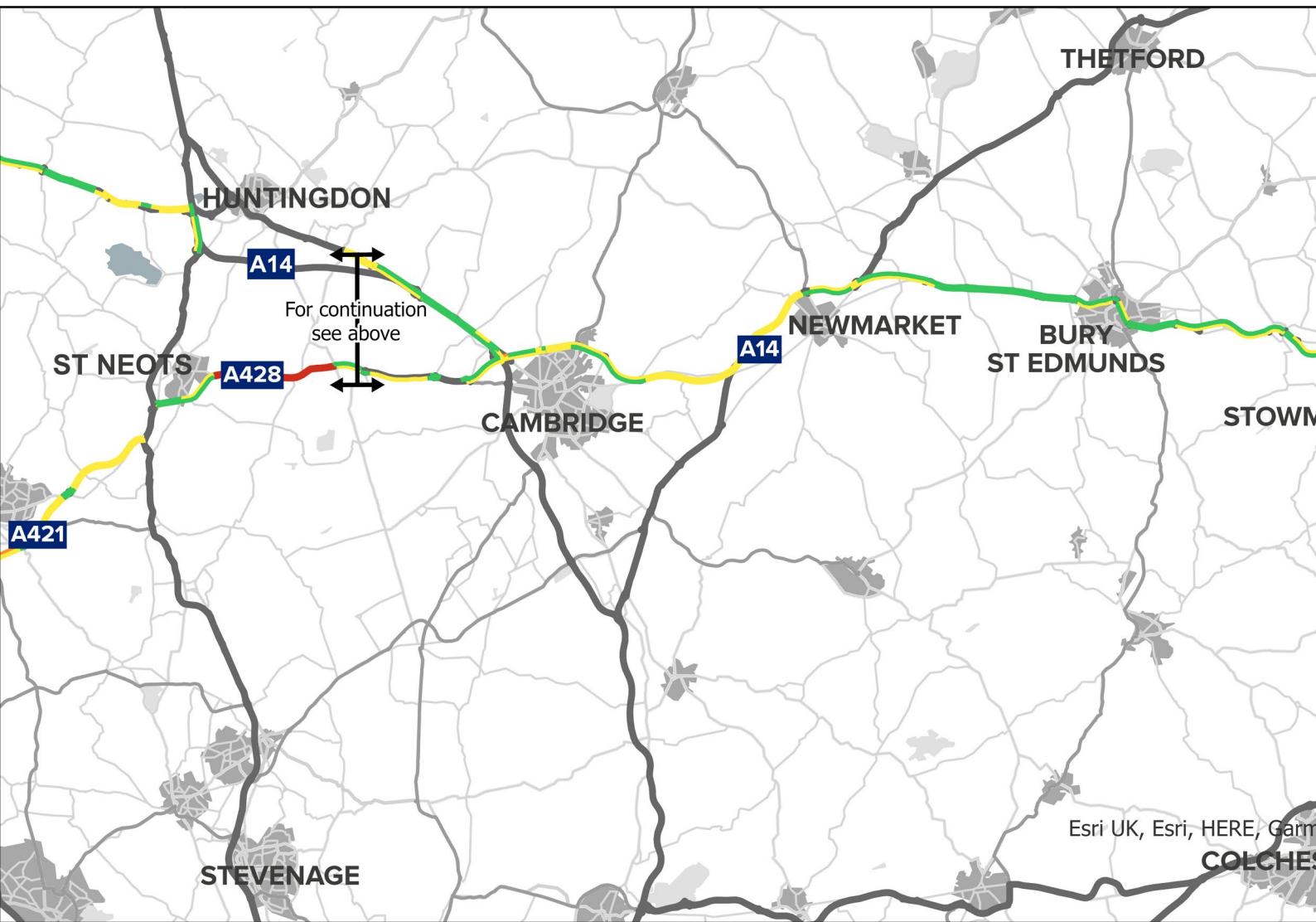
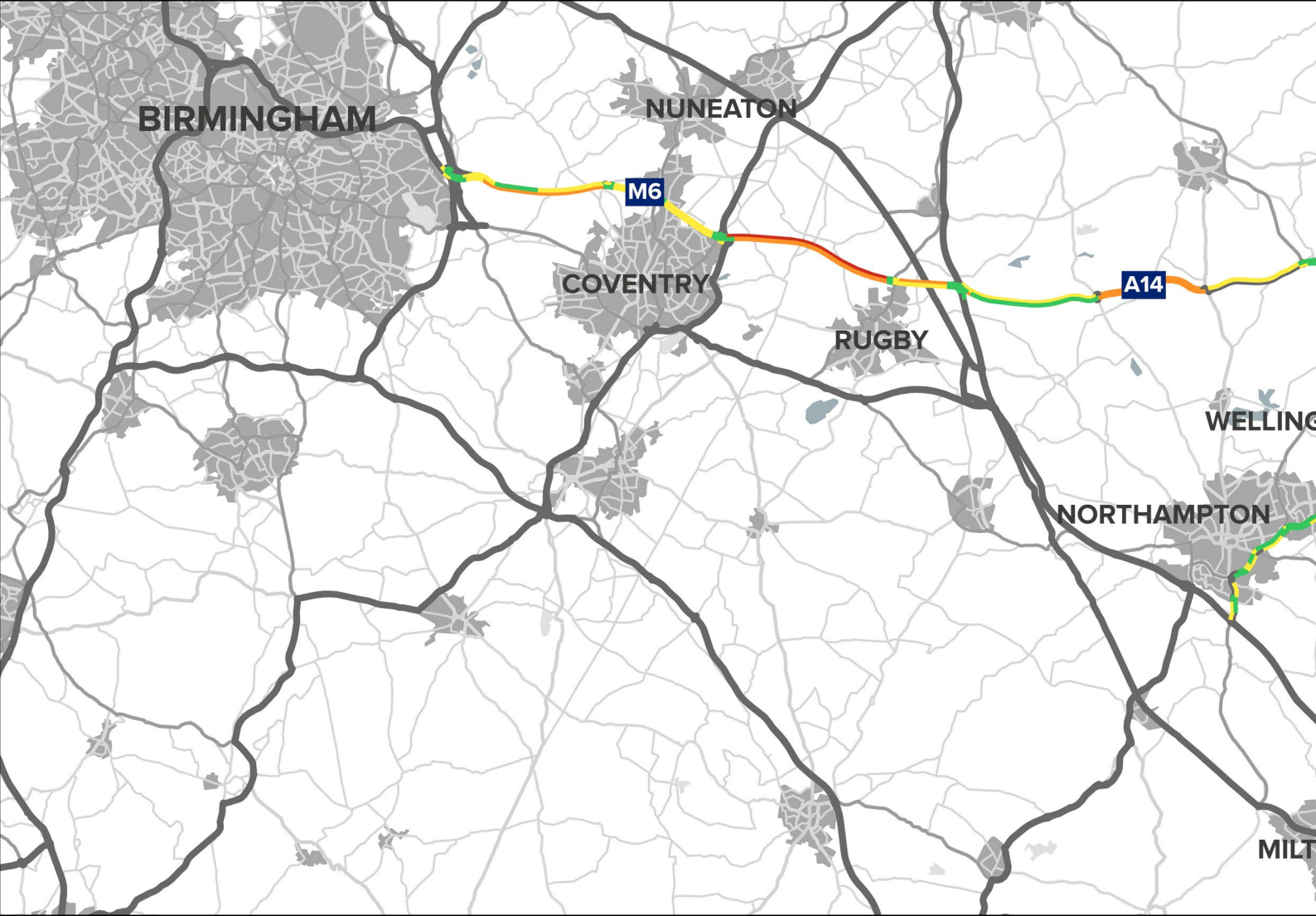
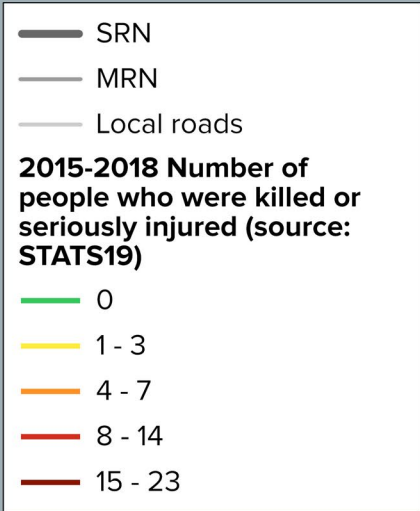
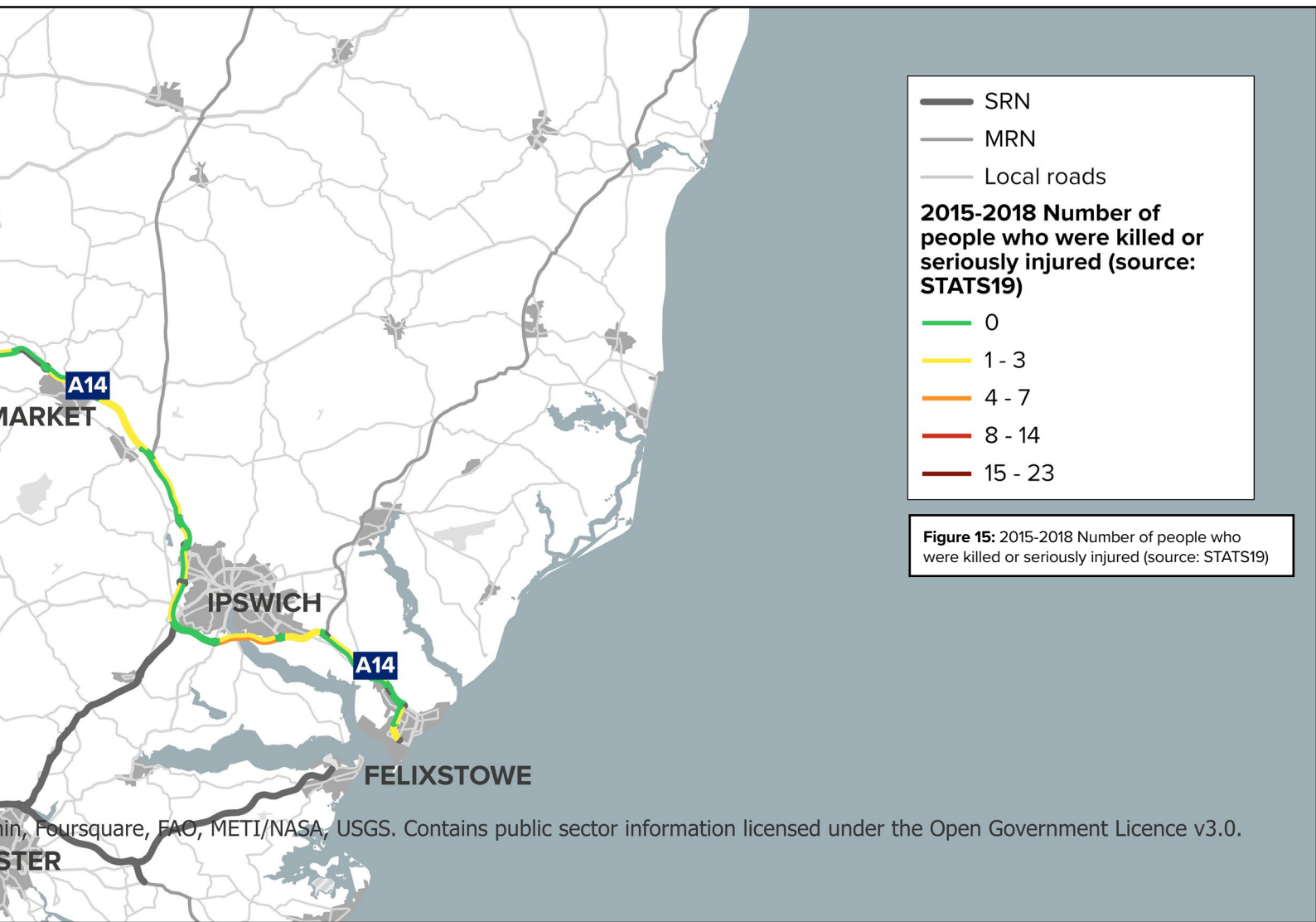
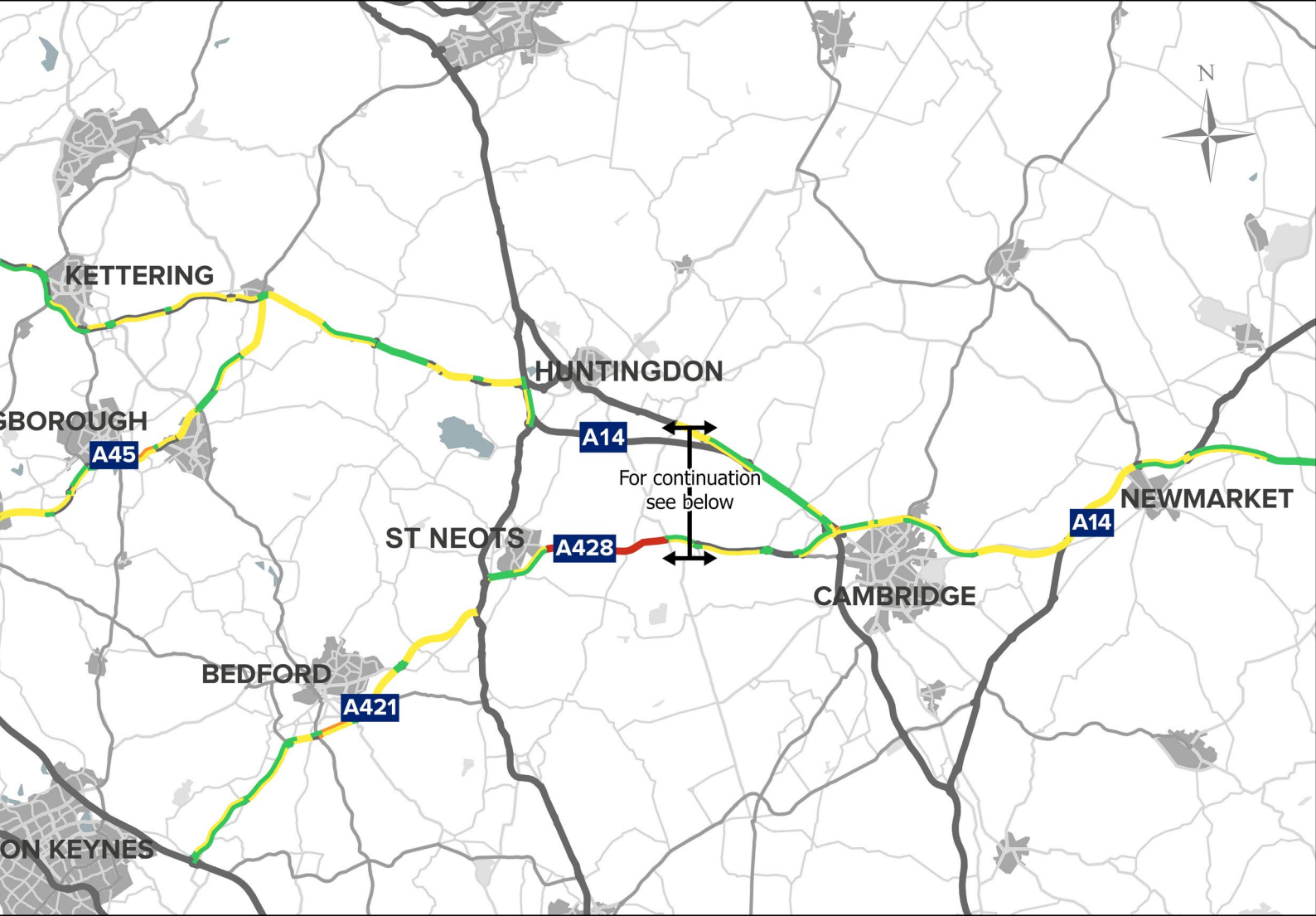


Figure 14: 2020 iRAP star rating







**Figure 15:** 2015-2018 Number of people who were killed or seriously injured (source: STATS19)



## 2. Network performance

Network performance is measured by average delay, seasonal delay and journey time reliability. Many sections of the Felixstowe to Midlands route experience one or more of these types of delay.

Figure 16 shows the delay caused by congestion during the morning peak in 2019. The lengthiest delays experienced on the Felixstowe to Midlands route are:

- A14 around Cambridge (up to 55 seconds per vehicle per mile (pvpm))
- A428 Caxton Gibbet to St. Neots (up to 43 seconds pvpm)
- A421 north of Bedford on approach to Black Cat Roundabout (up to 13 seconds pvpm)
- A421 on approach to the M1 (up to 110 seconds pvpm)
- A45 Rushden (up to 53 seconds pvpm)
- A45 Wellingborough (up to 46 seconds pvpm)
- A45 South of Northampton (up to 56 seconds pvpm)
- M6 between the M42 and the M1 (up to 26 seconds pvpm)

Average delay is measured in seconds per vehicle per mile and is the difference between observed average delay in the morning or afternoon peak period and the average delay during free flow conditions.

Seasonal delay refers to the difference between the average afternoon peak delay for Fridays in August 2019 (high demand in summer holidays) and the average delay during very low demand periods (in this case, Christmas day is used). This measure is designed to reflect the parts of the network that do not appear to have a problem on average over the year but have seasonal peaks.

We want to improve journey times on route sections which experience high levels of delay and are expected to worsen in the future

Delays are expected to worsen at the above locations in future scenarios. Figure 17 highlights future morning peak delays for 2031, based on forecasts.

Single carriageway sections of the route are also experiencing delays at locations such as the section between Stanwick Roundabout, Raunds and Thrapston.

National Highways has a suite of five regional traffic models (RTMs) covering England's SRN. The models allow us to identify future performance and delay on the network, assisting with the development of the route strategies.

The RTM models use projected growth, expected trends and changes to the network (including National Highway's RIS2 schemes) to forecast the performance of the network in 2031.

Seasonal delay is of interest to tourist traffic, particularly people travelling to airports, or other destinations where arriving later than intended could have significant implications.

Reliability is the difference between the typical travel time, allowing for recurring delays, and the observed travel time. This measures the amount of variation due to unexpected variations or unplanned events. Like delay, it is measured in seconds per vehicle mile. It is a concern for most drivers, but particularly affects just-in-time freight traffic and other strategic journeys.



Figure 17 shows that delays are set to increase on the A45, around Northampton, Wellingborough and Thrapston, and Kettering as well as the M6 between the M1 and M42. Delays are also expected to increase east of Cambridge and on most of the route down to Ipswich.

Limited technology provision on the A14 makes it more difficult to manage disruptive incidents and communicate information to forewarn and assist drivers. The lack of suitable alternatives or diversion routes means that collisions or planned roadworks can create severe disruption.

Heavy goods vehicles (HGVs) rely on the main east-west route from East Anglia to the Midlands. On the A14 HGVs form a much higher percentage of total vehicles than average, between 21% and 25%, compared to the 11% East of England Trunk Road Average. The route is home to the 'Golden Triangle of Logistics' for transportation of goods across the country. This is the area bounded by Birmingham, Nottingham, Bedford, Rugby and Coventry. High levels of HGV traffic can result in increased congestion and related issues, including reduced air quality, reduced safety, increased noise from the grouping of traffic and more dangerous overtaking manoeuvres.

Interested parties stated that delays across A-roads are commonplace and significant, hindering the movement of people and goods to nationally significant international gateways. This leads to additional time planned into journeys to compensate for delays and unpredictability.

Road users and communities have stated through engagement that limited movement junctions such as at the M1/M6 at Catthorpe have caused drivers to reroute away from the SRN. This is causing congestion elsewhere, such as at the A426/A5 Junction (covered by the South Midlands Route Strategy) showing high AM delays when compared to free flow. It also causes issues for the villages that traffic passes through, which could be avoided if it were possible to make such journeys exclusively on the SRN. This is impacting network performance.

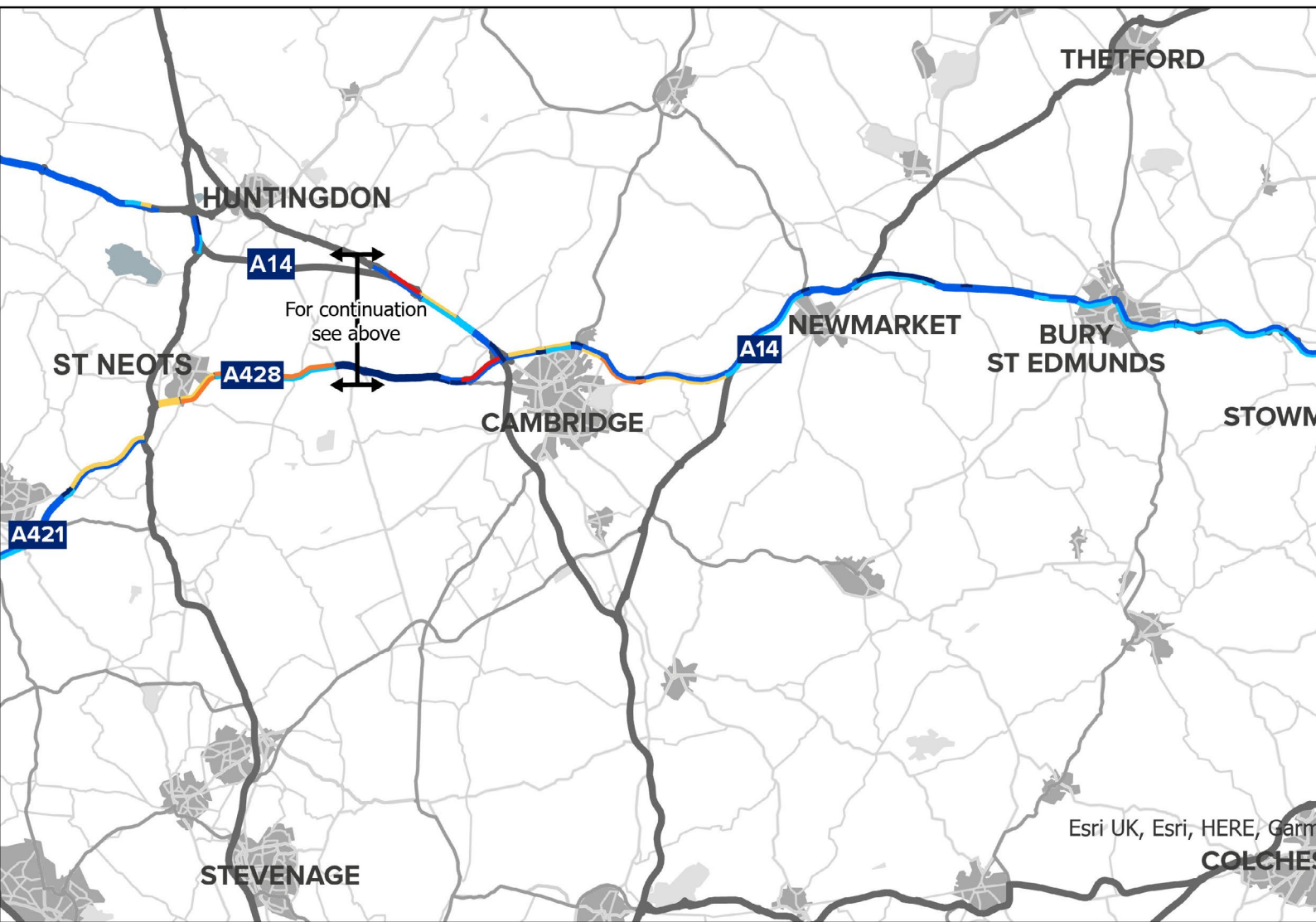
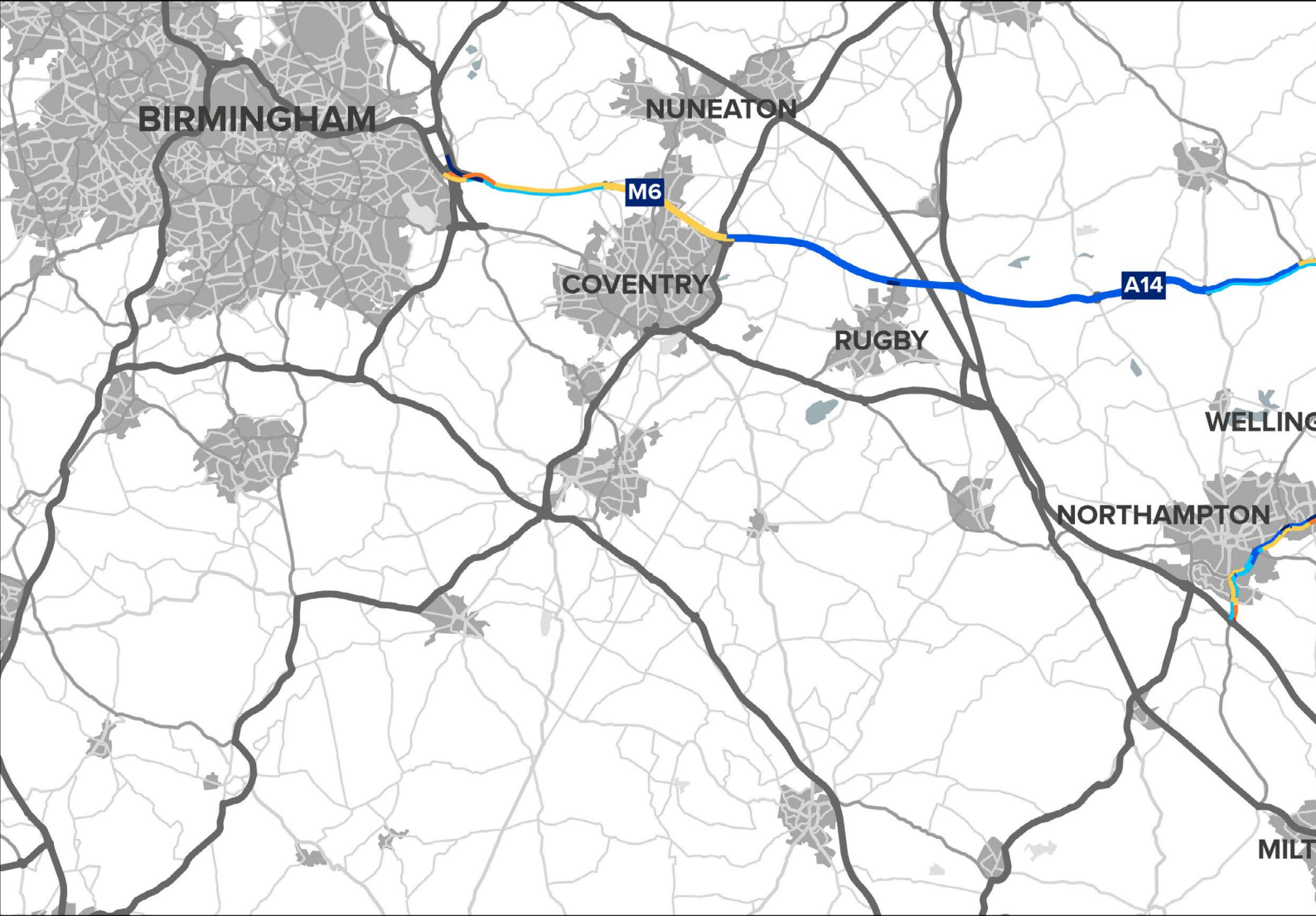
Reliability is the difference between the typical travel time, allowing for recurring delays, and the observed travel time, which may be affected by unplanned incidents or events. Like delay, it is measured in seconds per vehicle per mile. It is a concern for most drivers, but particularly affects just-in-time freight traffic and other strategic journeys. For the Felixstowe to Midlands route, this is experienced around Chowns Mill roundabout, Rushden, Wellingborough and Northampton and between Bedford and Black Cat roundabout and Cambridge. Copdock Interchange was also raised by interested parties as a location where demand can exceed capacity, causing delays for time sensitive traffic accessing the nearby port of Felixstowe.

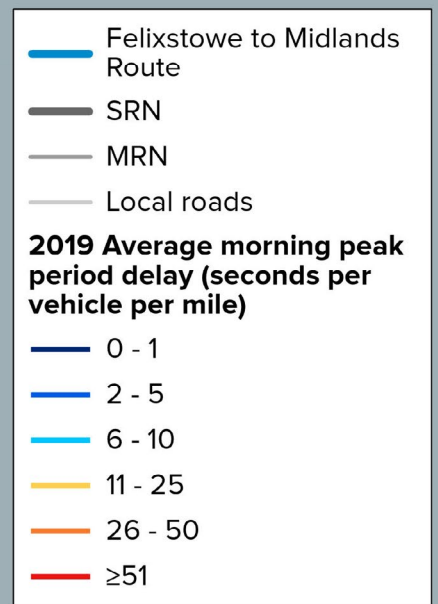
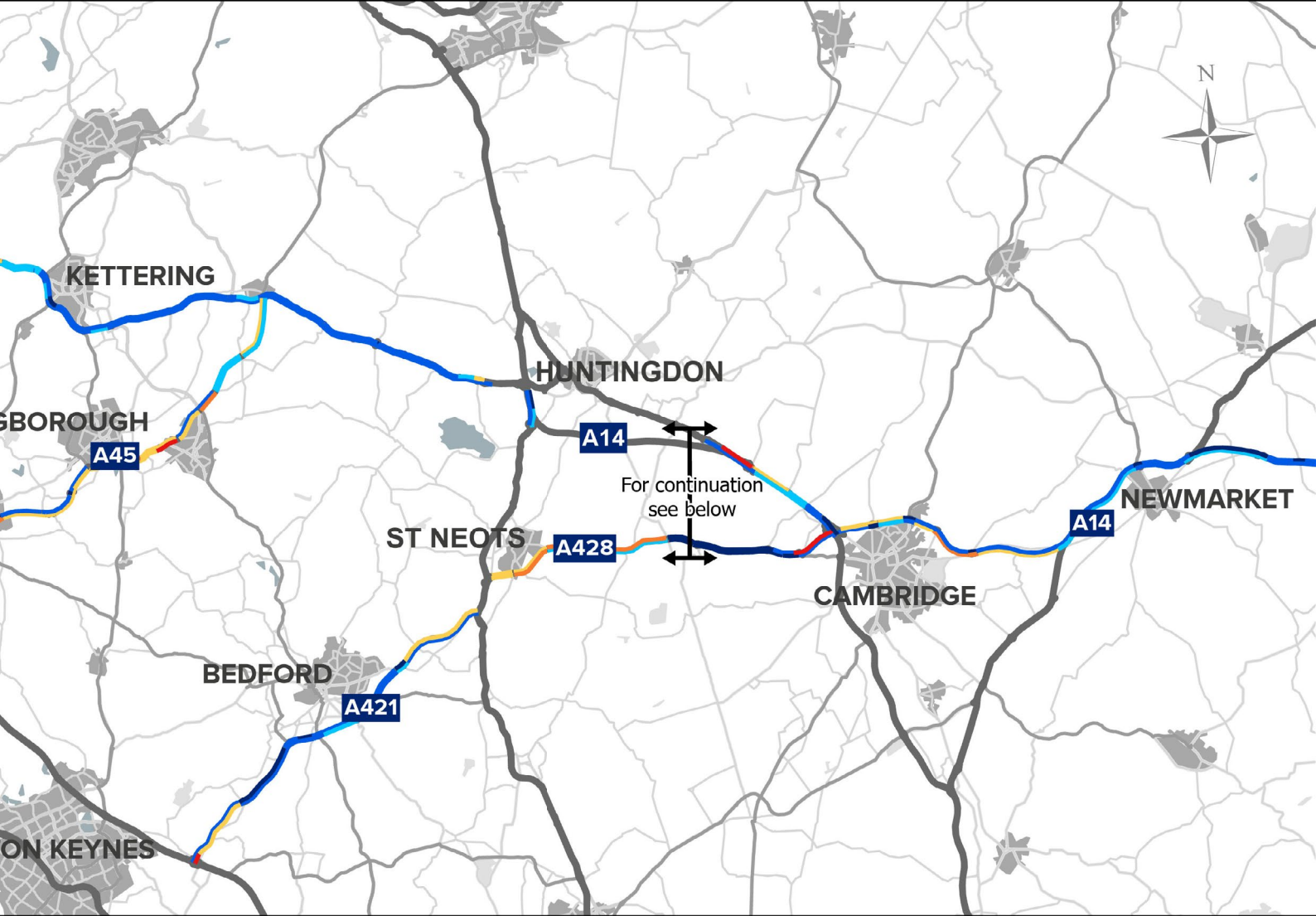
Seasonal delay refers to the difference between the average afternoon peak delay for Fridays in August 2019 and the average delay during holiday periods. This delay may have added significance for tourists, particularly those travelling to airports, or other destinations where arriving later than intended could have significant implications. When compared to the SRN elsewhere, the Felixstowe to Midlands route does not experience greater than average seasonal delay.

### Key challenges

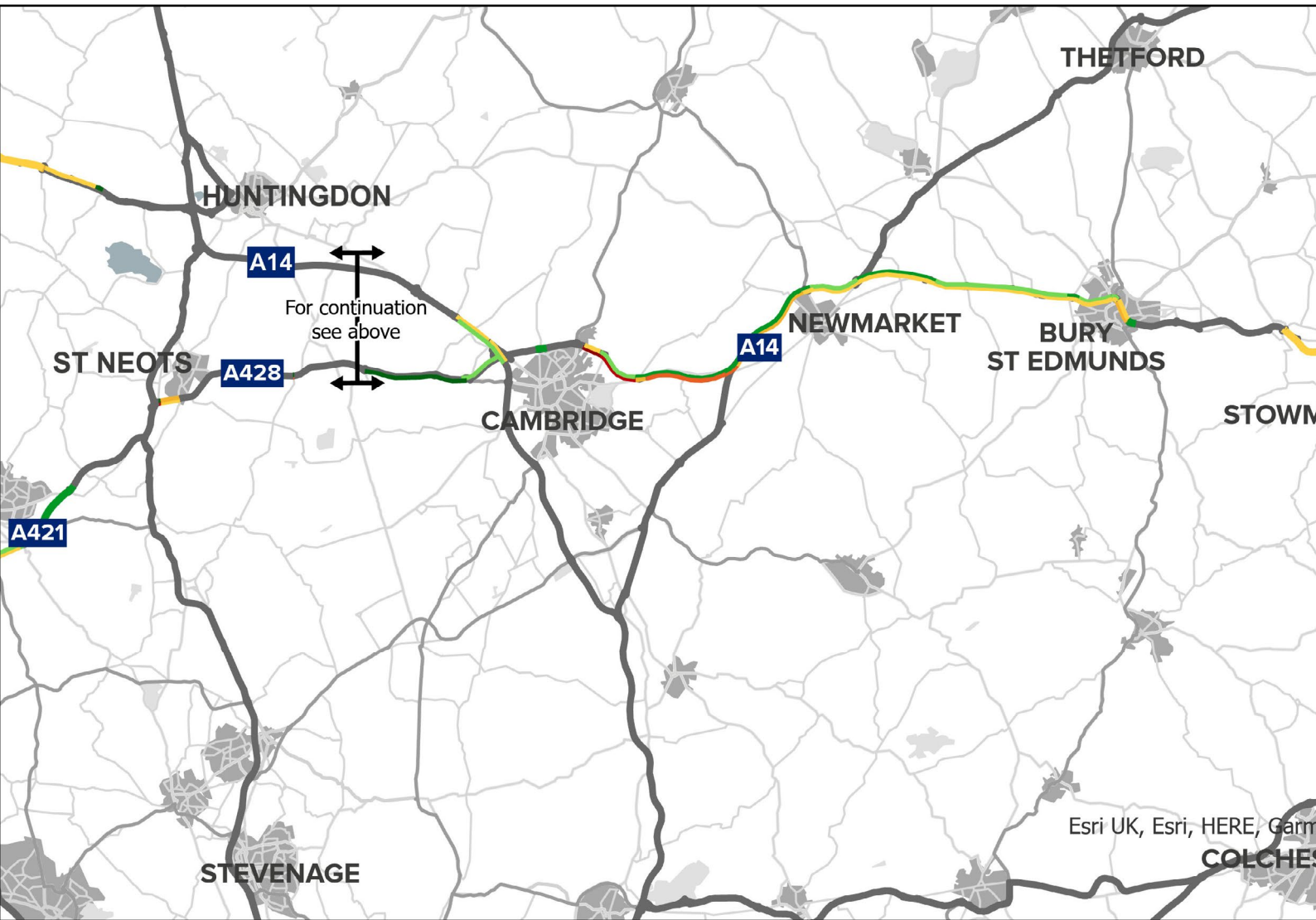
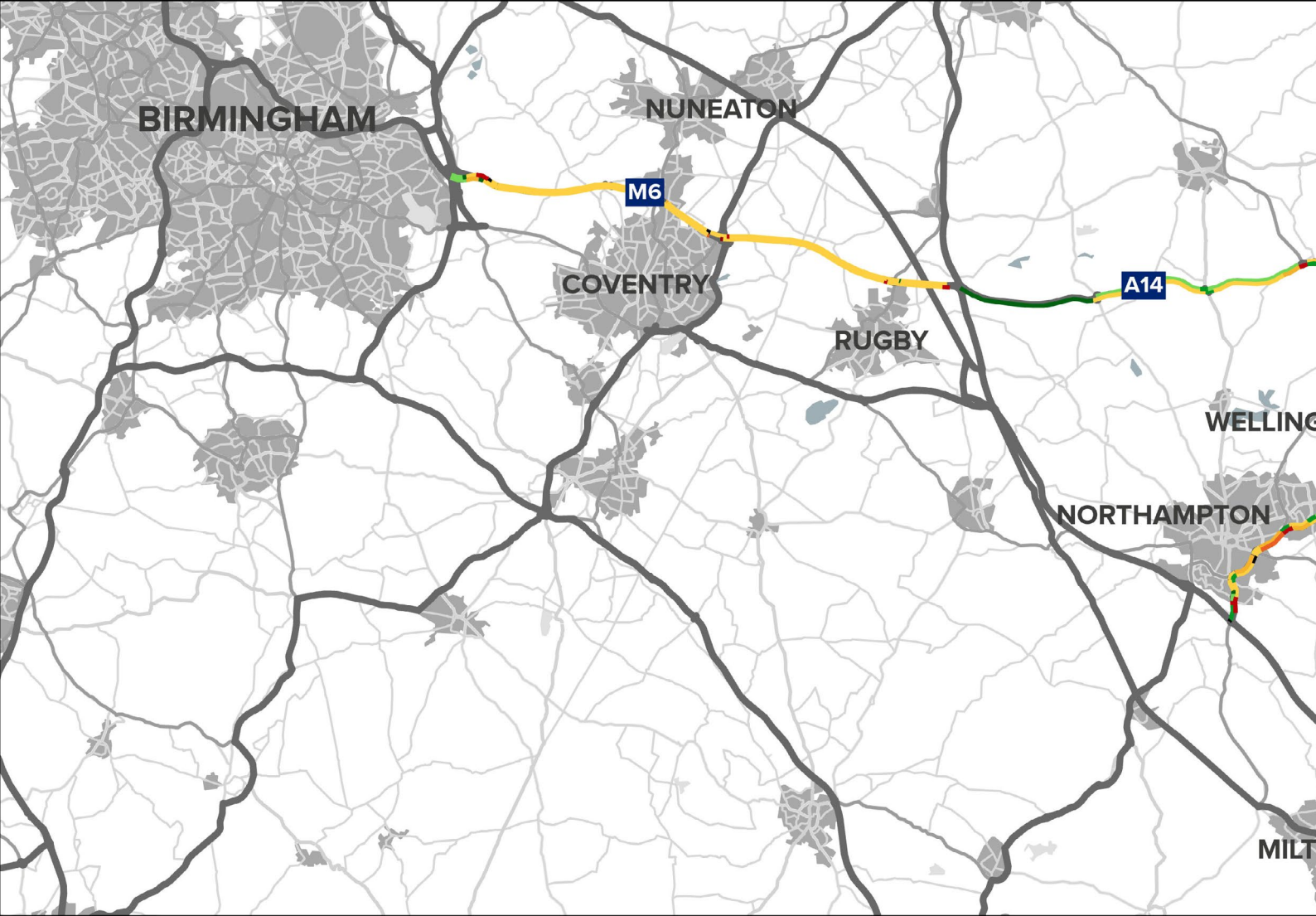
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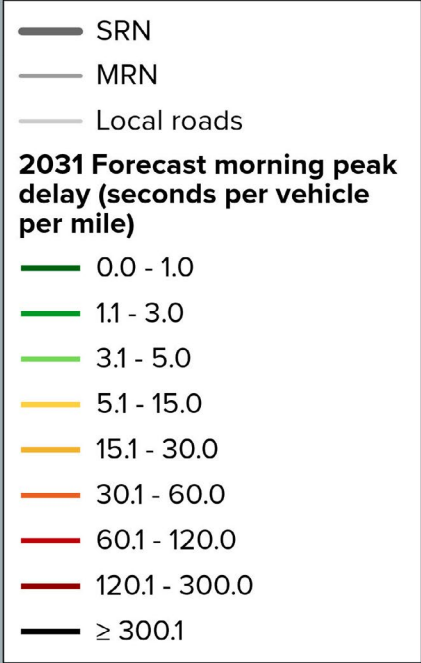
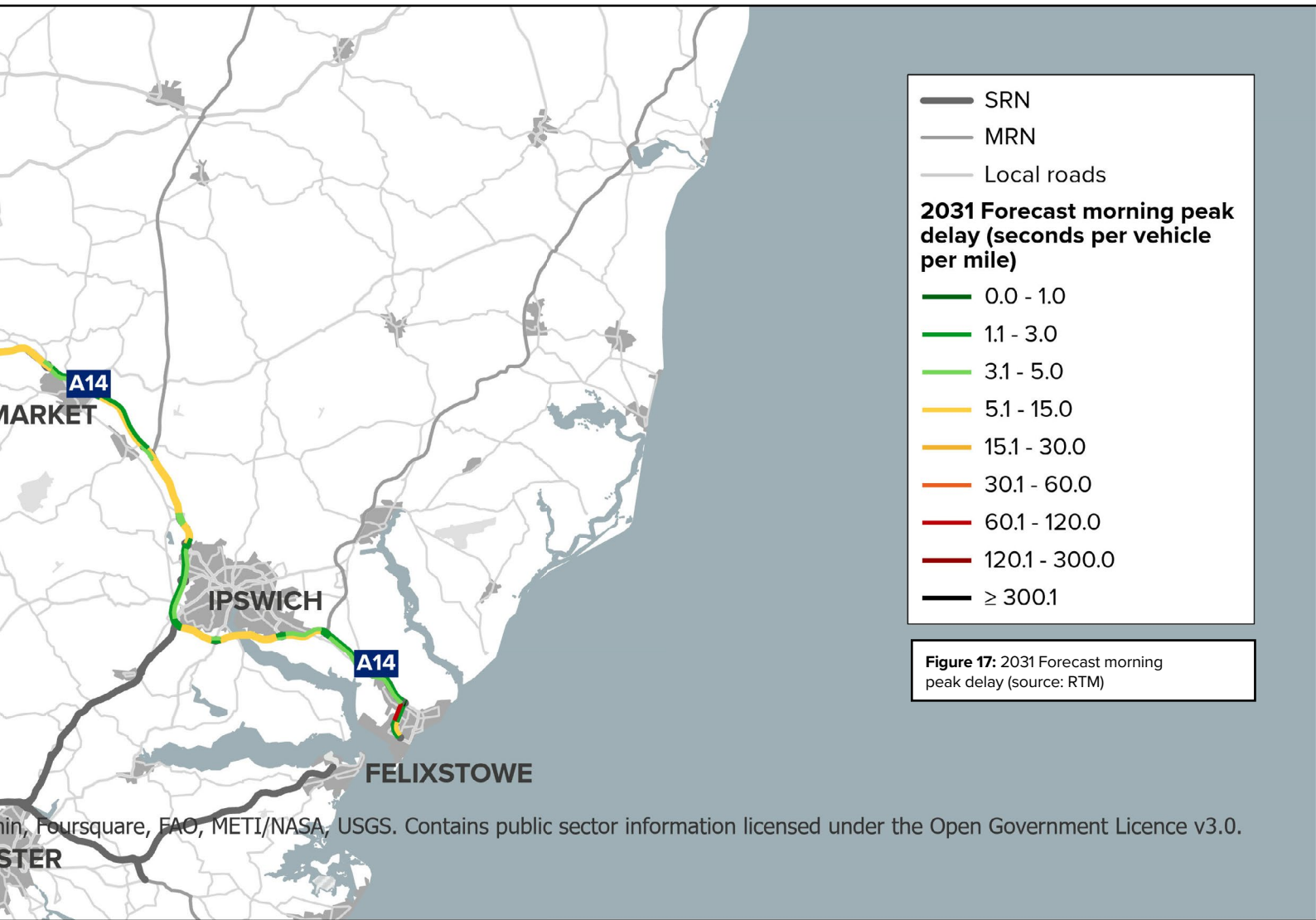
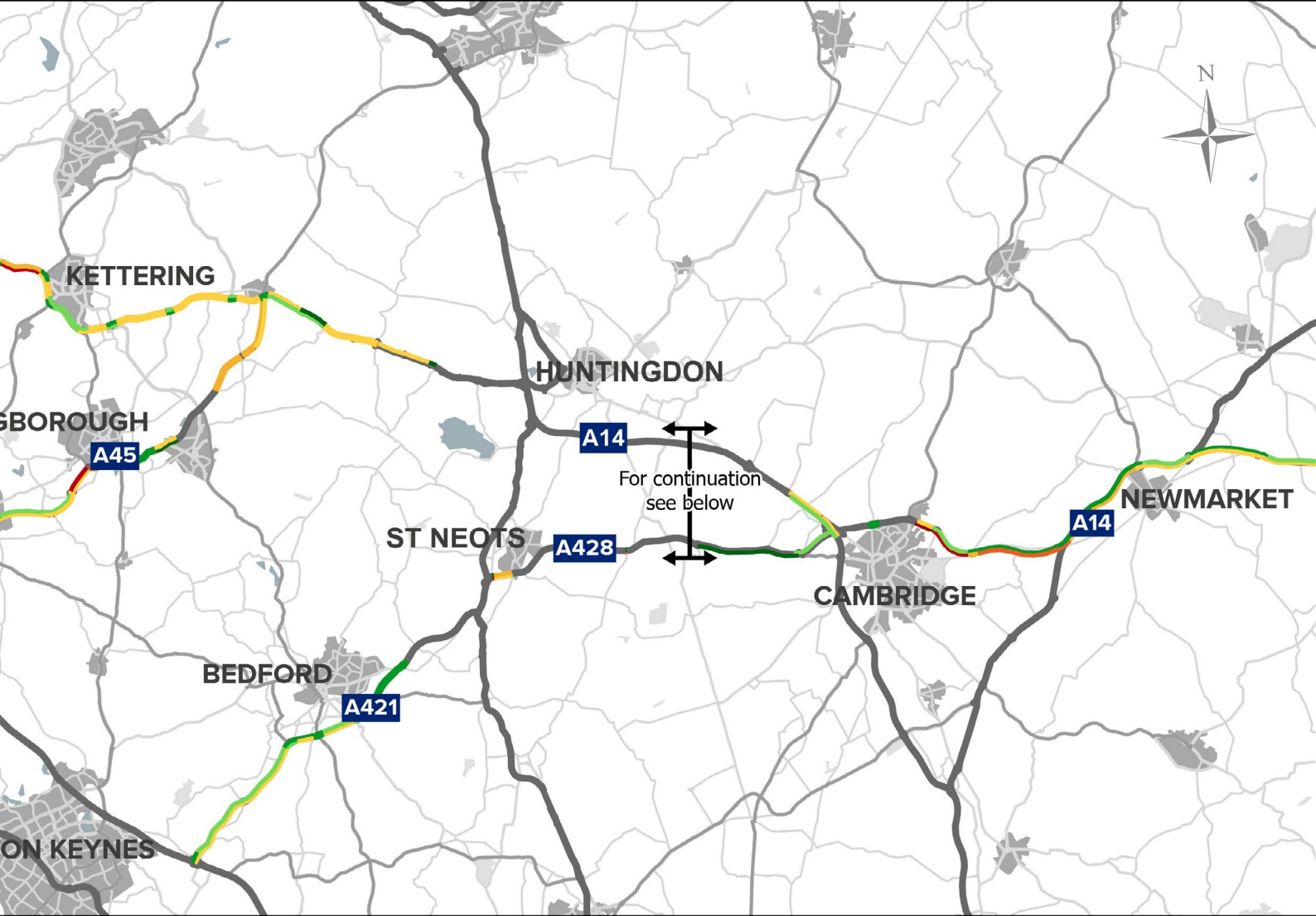
- Local roads, including the Major Road Network (MRN), that interface with the Strategic Road Network (SRN) can suffer from the impact of the lack of SRN alternative routes, and capacity and reliability issues
- Diversion routes are often less suitable for high volumes of freight or general traffic, which can result in secondary impacts, such as increased congestion, reduced air quality and increased noise
- Limited technology provision makes it more difficult to manage disruptive incidents and communicate information to users





**Figure 16:** 2019 Observed morning peak average delay (source: NTIS)





**Figure 17:** 2031 Forecast morning peak delay (source: RTM)



### 3. Improved environmental outcomes

Climate change is affecting society as a whole, and the transport sector is no exception. As the government-owned company tasked with building and maintaining the strategic road network, we need to show both how we can help tackle the causes of climate change and how we are preparing for a changing climate. In 2021 we published our *Net zero highways plan*<sup>28</sup> to show how we will meet the target of net zero greenhouse gas emissions.

The latest climate projections from the Met Office have helped us to understand how the climate is changing, including that summers will on average be hotter and drier, while winters will be milder and wetter and critically, that extreme weather will become more common. We have also seen, from reports such as the *Climate Change Committee's*<sup>29</sup> third and most recent independent assessment of climate risk, that there are key risks from a changing climate for infrastructure, such as risks to bridges from flooding and erosion and risks to subterranean and surface infrastructure from subsidence.

Air quality describes how polluted the air we breathe is. Low air quality can cause both short-term and long-term effects on the health of humans and other living beings. The amount of air pollution depends on the concentrations of different substances in the atmosphere, such as sulphur dioxide, oxides of nitrogen, and particulate matter. In the UK, the concentrations of these pollutants are regulated and regularly monitored. If a local authority identifies any locations within its boundaries where targets are not being achieved, it must declare an Air Quality Management Area (AQMA) and put together a plan to improve air quality in that area.

While noise is often an inevitable consequence of societal activities, it can have serious implications for human health, quality of

We are committed to net zero carbon construction by 2040 and net zero carbon travel by 2050. This will involve significant changes to the way we build and manage our network, including in the Felixstowe to Midlands route area. We will need to consider better integration with other transport modes and how to support the transition to electric cars and zero carbon heavy goods vehicles (HGVs).

The route has significant cultural, ecological, and environmental sensitivities. Some of the route passes next to nature reserves, such as the Fen Drayton Lakes, as well as passing close by a number of Areas of Outstanding Natural Beauty (AONBs) of the Suffolk Coast and Heaths. The A14 and A12 are key gateways for accessing the Suffolk Coast, with the A14 also passing adjacent to the River Great Ouse. There are multiple listed or designated cultural heritage, water environment and habitat sites adjacent to the route. The latest climate projections show that the area surrounding the A14 from Felixstowe to the Midlands is likely to see a range of effects, including increases in winter rainfall, sea level rise and warmer temperatures.

life, economic prosperity and the natural environment. Elevated levels of noise, particularly from traffic, can be associated with heart attacks, strokes and hearing impairment, as well as sleep disturbance and annoyance. While there's no legal limit to road noise, environmental noise regulations in the UK require regular noise mapping and the creation of action plans for Noise Important Areas (areas exposed to the highest levels of noise).

Severance is where transport infrastructure or motorised traffic passes through settlements and acts as a physical or psychological barrier, limiting people's ability or desire to move through that area. This can reduce accessibility to key services, and damage local social networks and community cohesion.

<sup>28</sup> National Highways, *Net zero highways: our 2030 / 2040 / 2050 plan*, <https://nationalhighways.co.uk/media/eispciem/net-zero-highways-our-2030-2040-2050-plan.pdf>

<sup>29</sup> Climate Change Committee, *2021, Independent Assessment of Climate Risk*, <https://www.theccc.org.uk/publication/independent-assessment-of-uk-climate-risk/>

Some parts of the route already experience delays as a result of environmental challenges. These include sections of the A14 and A1 near Cambridge, and the A45 adjacent to Rushden, which are at higher risk of flooding around Fen Drayton and Rushden Lakes. This causes disruption and severance to the main transport link between Northampton and the East of England.

Sections of the route in certain locations pass in close proximity to housing frontages. It is in these areas where environmental issues from passing traffic are most significant.

In terms of air quality, there are receptors within 100m of the route which may be more likely to experience adverse air quality impacts in parts of Felixstowe, Ipswich, Stowmarket, Bury St. Edmunds, Cambridge, Thrapston, Kettering, Coventry, Wellingborough, Northampton, St. Neots and Bedford. There are multiple Air Quality Management Areas along the corridor, notably on the approach to larger urban centres, such as Cambridge and Huntingdon in the centre of the corridor.

Noise Important Areas (NIAs) for roads are based on the Department for Environment, Food and Rural Affairs (DEFRA). The effects of noise is particularly important to communities along the route, with towns and cities such as Bury St Edmunds, Cambridge, Bedford and Northampton in NIAs, or having clusters of houses within close proximity to the SRN.

There are receptors within 300m of the route which may be more sensitive to noise impacts in parts of Ipswich, Bury St. Edmunds, Cambridge, Coventry, Northampton and Bedford.

Parts of the route experience severance, such as Bury St Edmunds and at Junction 13 M1/A421.

Interested parties wanted a greater roll out of electric vehicle charging points, especially at service areas to encourage a switch to electric vehicles for longer distance journeys. The provision of alternative fuels was also raised.

Where possible we will seek to protect environmentally important locations and reduce air quality and noise impacts on communities served by the route

Engagement also revealed that interested parties want to explore options for travel demand mitigation before investing in expansion to the SRN, and implement active travel measures across the SRN alongside public transport provision.

There was strong support from interested parties, road users and local communities for using alternative modes instead of the private car, or HGV and for alternative fuels, such as by using electric vehicles.

Interested Parties would like to see reduced greenhouse gas emissions by providing alternative modes of travel and encouraging a lower share of journeys to be made by car.

#### Key challenges

- There are several AONBs and places with environment designations and cultural heritage near the route
- Traffic related environmental issues including air quality and noise impacts which may be more likely for nearby receptors living directly on the route, such as Bury St Edmunds, Cambridge and Northampton
- Greenhouse gas emissions from car and HGV traffic
- Exposure to severe weather events on the A14 at Cambridge and the A45 at Rushden



## 4. Growing the economy

Along the route there is significant amount of housing and employment which is planned to be completed by 2031, including the development of Sustainable Urban Expansions (SUE). The route should help support this planned development to grow the economy whilst encouraging shift to sustainable modes. Where the network is close to capacity, it is impacting the ability to cater for growth in homes and employment.

The route has a critical economic function in transporting international freight to and from Europe via the ports that will become part of Freeport East: Felixstowe, Harwich and Ipswich. The shipping container market is anticipated to register a growth of 4.3% during the period 2021-2026.

Freight rail movements from the port follow the Felixstowe to Midlands route corridor to distribution centres, such as Bedford and Birmingham. Interested parties suggested that the lack of HGV facilities through rest areas and overnight parking is contributing to a driver shortage, which in turn will impact the national economy.

The A14 supports this east-west travel and is vital in connecting East Anglia and the Midlands. A further function is to provide connectivity along the route between the growth areas of Ipswich, Cambridge, Huntingdon, Kettering, and Rugby.

The A14 is the key arterial route connecting traffic onto the major motorway networks of the M6 to Birmingham and the North West, and M1 to Yorkshire and the North East. The route provides a vital, and often the only, strategic link to the rest of the UK. The variability and unpredictability across the route could impact on the growth potential of the regional economies. Network resilience is also particularly important for freight traffic to the ports.

The strategic road network has a critical economic function in supporting national and cross-border connectivity and areas with high levels of deprivation

The index of priority places for the Levelling Up Fund places local authorities into categories 1, 2 or 3, depending on their identified level of need, with category 1 representing places deemed in most need of investment through this fund.

The route serves some areas with the more deprived indices of deprivation and areas that are rated as in “most need” of levelling up – these include Kettering on the A14, Wellingborough and Rushden on the A45, Bedford on the A421 and Coventry on the M6.

Additionally, the A14 and A12 provide important connectivity to the Nuclear New Build Generation Company building and operating a nuclear power station at Sizewell and the developing wind farm industry on the ‘Energy Coast’ in the east.

The route provides the main connection between large urban centres such as Coventry (M6), Birmingham (M6), and Cambridge (A14). These are relatively poorly connected to each other by public transport. This means there is high car dependency and the performance of the route is likely to have significant impact on areas of planned housing and business growth such as Kettering, Northampton and Bedford.



There is also significant growth planned south of Milton Keynes which will impact the A421.

Kettering Borough is expected to accommodate significant growth in the period to 2031. The Hanwood Park Sustainable Urban Extension (SUE) is planned to deliver 5,500 dwellings and associated development by 2031. Smaller SUEs at Desborough and Rothwell, close to the A14, will deliver 700 dwellings each. The overall jobs target for the borough is 8,100 by 2031. Areas such as food production and logistics will be targeted for this employment growth and will require a resilient road structure to achieve this.

Bedford Council will also deliver SUEs in the plan period at Wixams, Stewartby and Wooton. The Bedford urban area expects to have 1,900 dwellings delivered by 2030 and key “service centres” in the borough to have 2,000 dwellings. Central Bedfordshire council will have delivered at least 39,350 new homes and around 24,000 new jobs by 2035. Up to 5,000 of these new homes plus 40 hectares of employment land will be developed at Marston Moretaine, situated on the A421 corridor between Bedford and Milton Keynes. Appropriate infrastructure is necessary to support this growth.

The West Northamptonshire Joint Core Strategy Local Plan (Part 1) Adopted on 15 December 2014<sup>30</sup> identified a provision of 18,870 new homes to be built within Northampton Borough from 2011 to 2029. There are also eight SUEs identified in the Northampton area. There is also an enterprise zone which will provide opportunities for new developments and expansion schemes.

The East West rail line has proposed new stations near the A421 in the Bedford area. For example, new stations have been proposed between Stewartby and Kempston Hardwick, together with St Neots and Camborne on the A428 corridor, which will support local growth.

### Key challenges

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- Connectivity between the port of Felixstowe and the M1 and M6 is vital to the national economy
- Journey time variability and unpredictability are impacting network performance which is especially important to international freight hauliers
- Communities on the route in category 1, priority levelling up areas need to benefit from investment in the route to allow new employment development to be successfully integrated
- Considerable development expected along the route in coming years

<sup>30</sup> <https://www.westnorthants.gov.uk/west-northamptonshire-joint-core-strategy/west-northamptonshire-joint-core-strategy-local-plan-part>



## 5. Managing and planning the SRN for the future

### Maintaining the strategic road network

We deliver a comprehensive programme of maintenance to keep our assets in the right condition to provide our customers with the right level of service; ensuring that the road network remains safe and fully open for use. We collect data on the condition of all of our assets so that our teams of specialist engineers can fully understand their current condition and identify the optimum time to intervene, maintaining the asset and replacing parts before they fail and impact customer journeys.

Our asset inspections to collect much needed condition data are undertaken through a number of methods - survey vehicles collecting road surface condition for the whole of the network every year right through to structures inspections, where we undertake over 23,000 inspections of individual structures every two years. The majority of our asset routine maintenance activities and the replacement of thousands of asset components as they near end of life are undertaken at night to minimise customer disruption, meaning that most of this work is never seen.

### Road surface

The measure for road surface condition has been updated for 2022/23 onwards. The condition is reported as one of our Key Performance Indicators and shows the condition of all available lanes of the main carriageway based on 3 elements of the road surface condition namely - the levels of surface rutting (caused by wheel tracks being formed in the surfacing), skid resistance (how slippery the road is) and longitudinal profile (how bumpy the road feels) with a target of 96.2% or more in good condition. At the time of publication, the road surface had a score of 96.7% in good condition, thereby meeting the national surfacing condition target.

This route consists of approximately 900 lane-kilometres of road surfacing.

The surface condition across the route is considered to be sound, with 92% of pavement asset not requiring investigation for possible maintenance.

### Bridges and structures

There are 340 structures across the route, including bridges and large culverts. According to an analysis of current data, 92% of our structures are in very good or good condition. By carrying out inspections of each individual structure every two years, we identify any defects that may require maintenance, thereby helping to ensure that structural components are replaced before they fail.

Figure 18 shows how investment in this route has improved the average condition scores of structures, since 2006. The average condition score is derived from asset inspections on structural components, accounting for the relative importance and size of each component. If no maintenance or renewals were planned, the scores would be expected to decline from 100 (perfect) as the structures deteriorate over time. We have a rolling renewals programme to replace asset components identified in our inspection programme, improving the structure condition to ensure all structures remain in a safe condition and fully open for use.

We have identified significant structures renewals for RIS3, and these schemes affect one structure in this route.

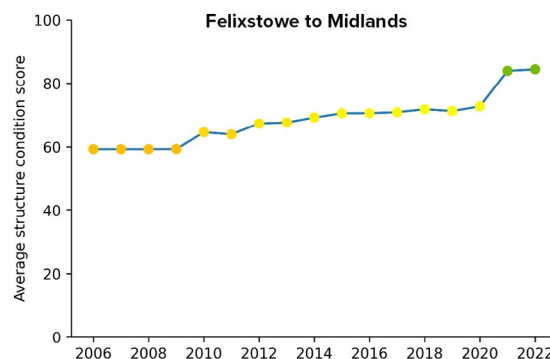


Figure 18: Average condition scores of structures, since 2006

## Drainage

Drainage assets are represented by both linear assets (for example underground pipes, channels, ditches, drains) and nonlinear assets (for example gullies and chambers). At national level, 90% of the drainage assets are in good structural condition and 87% are in good service condition.

## Geotechnical features

The geotechnical asset, comprising over 12,000 kilometres of earthworks embankments and cuttings carrying the road network is assessed through a programme of inspections and rated for its ability to provide the right level of safe functionality. The condition assessment of this asset is that 99.61% is in good condition to continue to function correctly. We use the inspection surveys to identify where any of our geotechnical features may require maintenance now or in the future, to ensure they are never at risk of failure.

## Future developments

We have been transforming our approach to maintenance through our Operational Excellence and Asset Management Transformation Programmes. Bringing our key asset maintenance decision making and planning activities back in-house so that our own staff are responsible for planning maintenance activities, along with improving the consistency of our end-to-end maintenance and asset replacement programmes will bring significant benefits. Our asset management transformation also includes the improved analysis to identify the investment required on the strategic road network during the third Road Period (2025-2030). The business case will provide evidence to support future maintenance investment, clearly articulating the costs and benefits of delivering an effective maintenance and asset replacement programme.

## Operations

We are establishing a nationally consistent approach to the management of our operational capability through our Operational Excellence change programme. This will deepen our understanding of how our interventions impact on the performance of the network and on the journeys of our customers. We are using the latest analytical software to process traffic data and gain insight into:

- How our operational services can improve safety and provide security to road users
- How the attendance of a traffic officer has an impact on incident durations
- How information provided by National Highways can benefit road users who plan their journeys beforehand and then while on their journeys
- Highways can benefit road users who plan their journeys beforehand and then while on their journeys

By better understanding our current operational performance, we can create a baseline from which we can identify opportunities for improvement.

## Key challenges

- Contributing toward the national target of 96.2% or more of carriageway being in good condition
- Maintaining the good condition of the strategic road network's geotechnical assets
- Ensuring that drainage assets are maintained so that their good structural and service conditions can be upheld



**The average condition of the structures on each of National Highways' Routes is either 'Good' or 'Very Good'**

70

The average condition score is the aggregated result of structural components, into a single metric, accounting for the relative importance and size of each component. A score of 100 indicates perfect (as new) condition.

There are no Routes with an average condition score below 70.

100

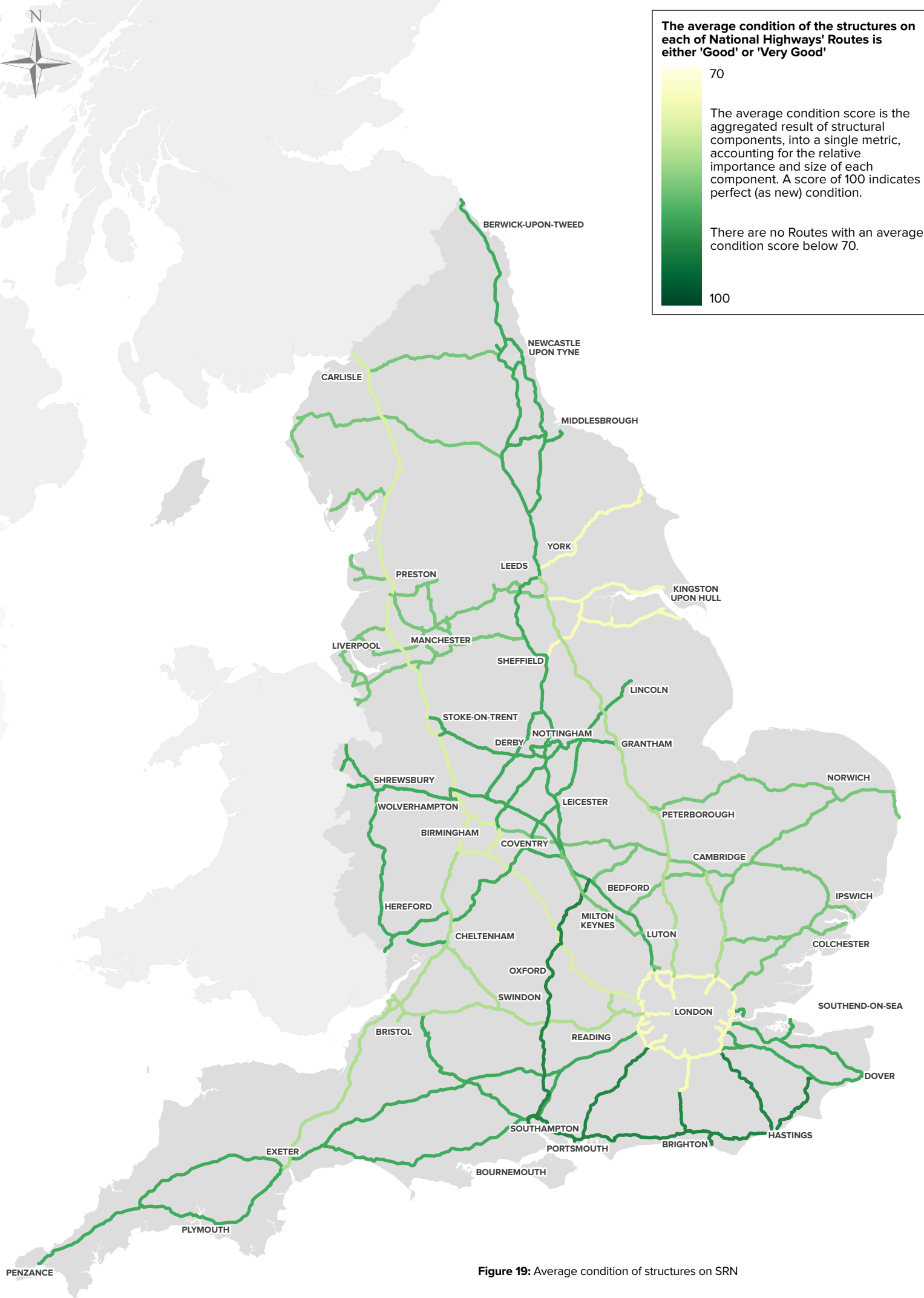


Figure 19: Average condition of structures on SRN



## 6. A technology-enabled network

Facilities to improve journey quality and network efficiency on the strategic road network (SRN) are of importance to our road users. High quality travel information before and during travel helps to:

- Reduce day-to-day delays and maximise the efficiency of the SRN
- Minimise the adverse impacts of incidents
- Improve the quality of the journey experience
- Allow people to make more informed travel choices, including about when and how to travel

There is currently very limited technology along the A14, providing an opportunity to further integrate highway technology to create a more efficient corridor for all modes of travel.

Existing electric vehicle charging infrastructure is sparse across the route, with large sections of the A14 unserved by electric vehicles infrastructure where it instead concentrates along the urban centres of Bury St. Edmunds, Bedford, Cambridge and Kettering. Interested parties wish for more charging points, particularly at service areas.

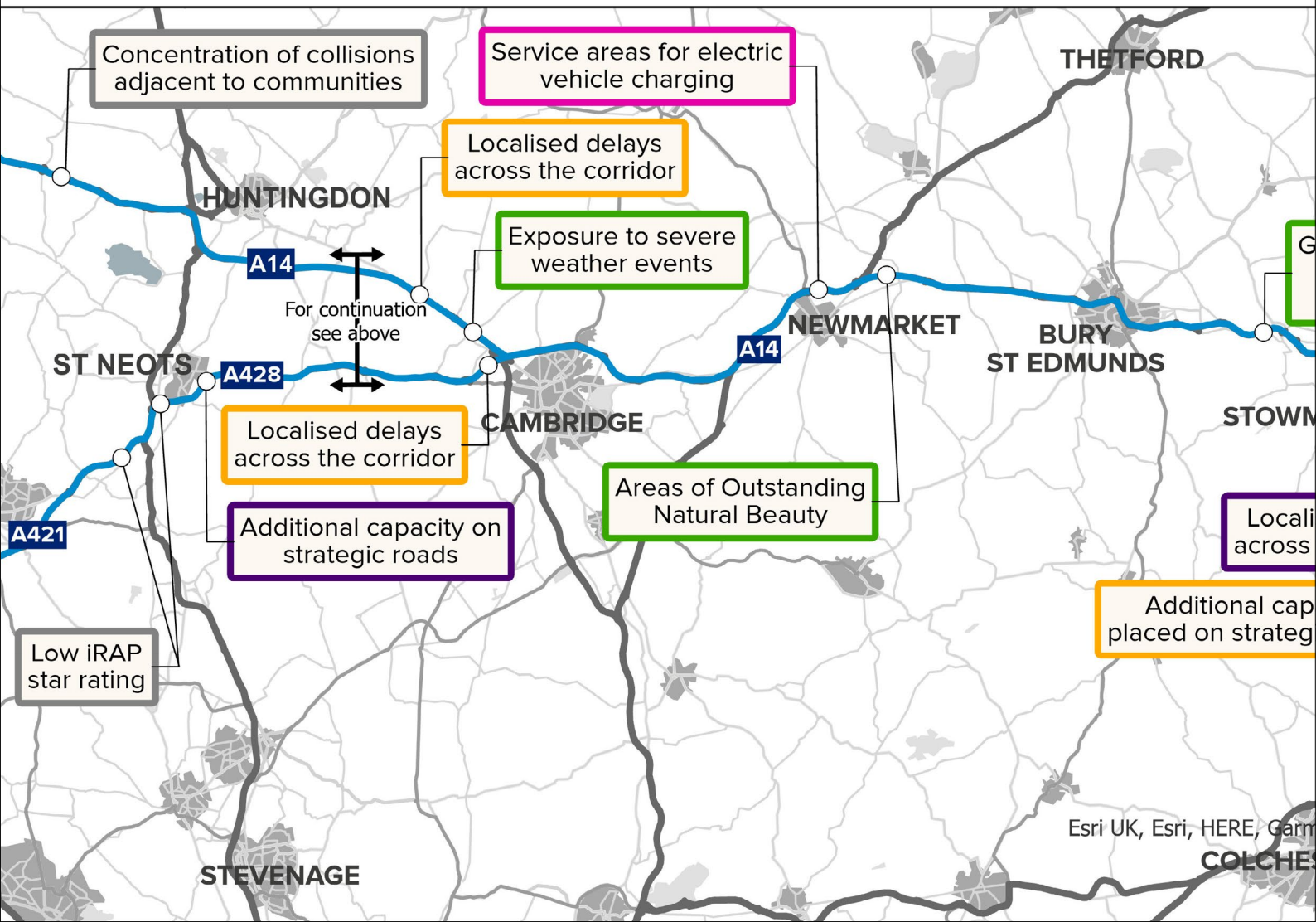
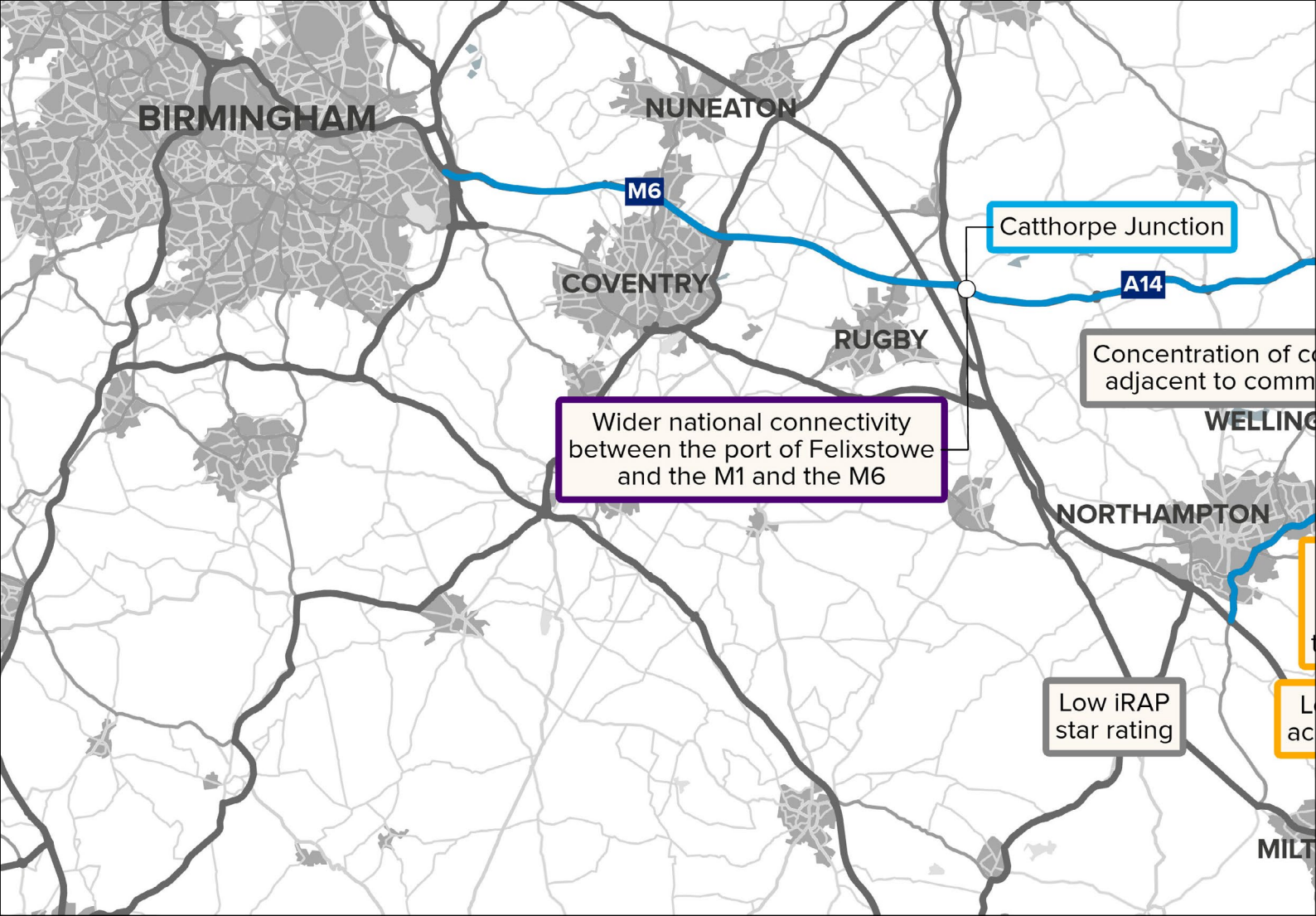
Engagement with interested parties raised the case that there is an opportunity to better integrate technology within our route with the local highway and the major road networks.

We will support improved communications and facilities for all

Currently the lack of technology on the route leaves road users with little advanced warning of any issues on the network that would allow them to better plan their journeys. The route plays an integral role for access to international gateways and tourist destinations, therefore there are a significant number of road users who do not use the route regularly and would benefit greatly from real-time information and updates.

### Key challenges

- Limited communications to drivers on key roads such as the A14, worsening traffic and causing delays
- Limited electric vehicle charging points accessible to longer distance traffic, which may be discouraging the uptake of low carbon vehicles



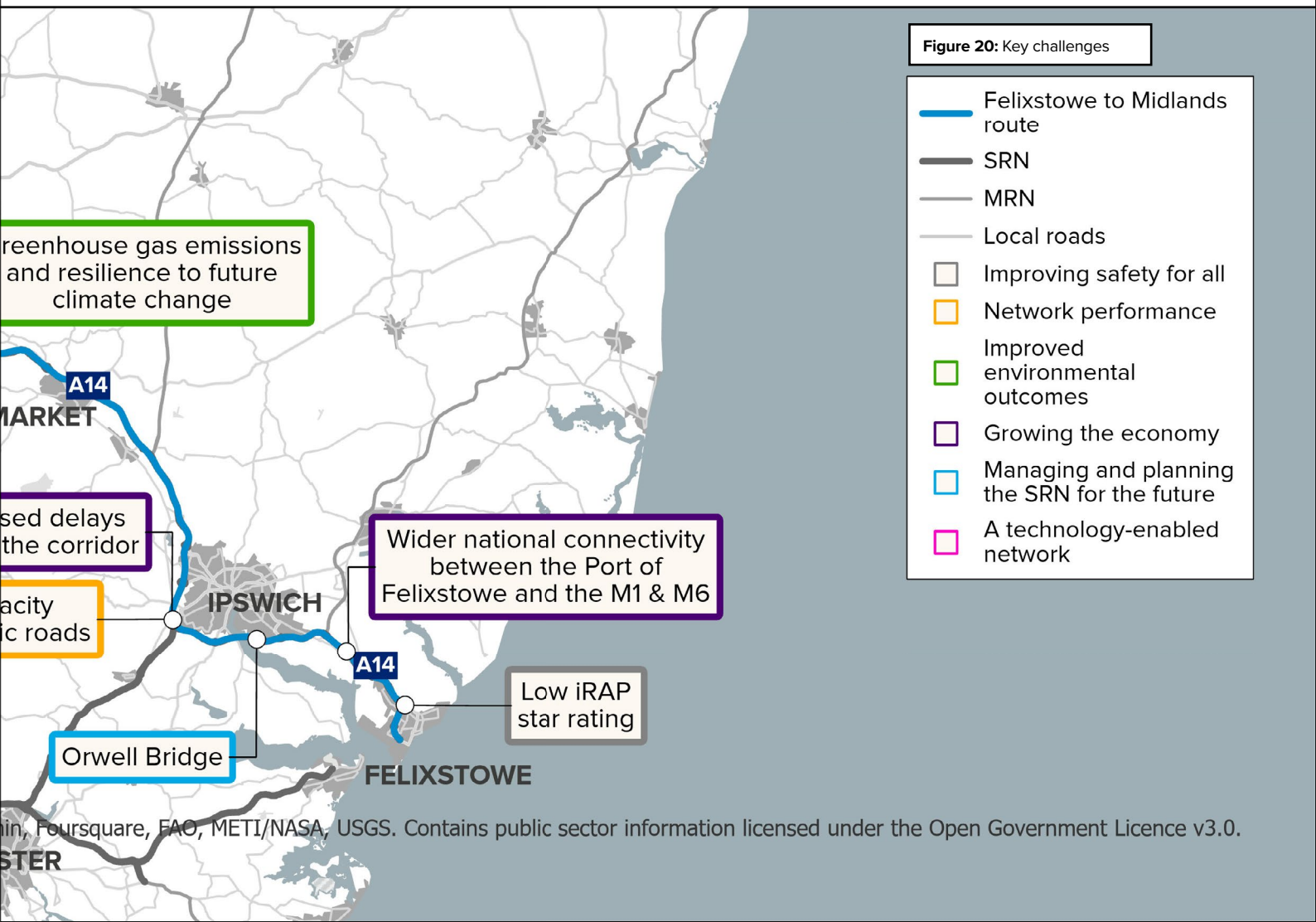
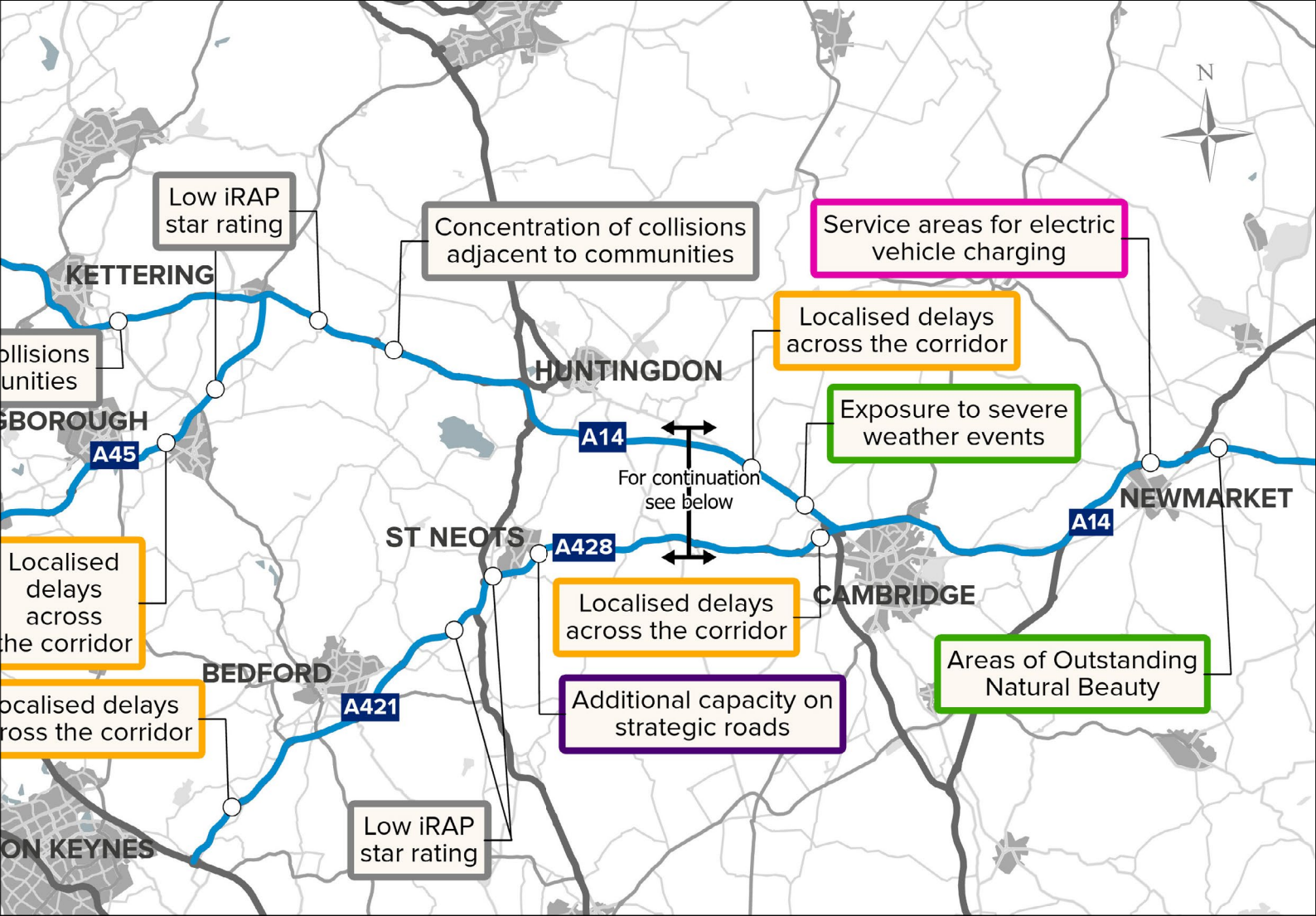


Figure 20: Key challenges

- Felixstowe to Midlands route
- SRN
- MRN
- Local roads
- Improving safety for all
- Network performance
- Improved environmental outcomes
- Growing the economy
- Managing and planning the SRN for the future
- A technology-enabled network



**Our  
ambition for  
the route**



# 06 Initial route objectives

We want to provide safer and more reliable journeys for all those who use or live alongside our network on the Felixstowe to Midlands route, and help the region achieve its economic and housing growth ambitions. Based on our engagement and data analysis, we have defined seven route objectives for the area.

We developed the route objectives based on:

- Feedback from customers and neighbours outlined in Chapter 3
- Opportunities to collaborate with other network operators, outlined in Chapter 4
- Constraints and challenges, as highlighted in Chapter 5
- How best to contribute to the Department for Transport's six strategic objectives

Each route DfT's strategy includes a series of specific route-based objectives. These objectives, informed by extensive data analysis and engagement with customers and neighbours, set out our ambition for each route. Although route objectives are route-specific, they should also be considered in the context of our commitments and ambitions for the whole network, as per our Licence agreement. This means that, while we may identify certain locations within a route for further consideration, we will seek to address these locations in line with our ongoing commitment to achieving our safety, environmental and technology obligations across the strategic road network.

It should be noted that there is overlap between the objectives, and we recognise they cannot be considered in isolation from each other. They should be considered alongside our asset plan.








The route objectives, their supporting narratives, and locations for further consideration will together inform the development of the Road investment strategy (RIS). They do not represent a commitment to road-based interventions but are intended to enable multimodal interventions to be explored as part of later study phases. It should be noted that the route objectives do not signify an assurance of investment in a particular route, nor do they remove the need to follow statutory processes.

As these are initial route objectives subject to wider feedback, we have not at this stage set out in detail how we will measure progress against them. Understanding how interventions and initiatives have addressed the challenges identified is a complex and long-term task and the approach to it will need to be devised alongside the wider performance specification for the third road period. We expect to set out our approach to this more clearly in the finalised route strategy overview reports to be published alongside our Strategic business plan and Delivery plan later in this road period.

## Route objectives and DfT's strategic objectives

In Figure 21 we illustrate the seven route objectives on our route map and, in Table 1, we show how they contribute to The Government's strategic objectives for our network as a whole.

**Table 1:** How the route objectives map to the DfT's strategic objectives

	Ref	Route objective
	A	<p><b>Investigate safety issues at identified locations:</b></p> <p>Consider known safety issues on links and junctions such as A14 at Bury St Edmunds, Copdock as well as between Ellington and Thrapston to the benefit of motorists, local communities and active travel users</p>
	B	<p><b>Supporting strategic East/West connections to support the Energy Coasts:</b></p> <p>Develop safe and efficient east-west connectivity for strategic movements to and from the East of England to support both the local and national economy</p>
	C	<p><b>Promote sustainable access to key freight destinations:</b></p> <p>Support partners to encourage modal shift away from car and HGV to more sustainable modes to and from Freeport East to the benefit of the environment, communities and road users with a particular focus on freight movements</p>
	D	<p><b>Improve communications to better inform drivers:</b></p> <p>Better inform users of incidents to reduce exposure to potential delay and uncertainty surrounding journey time reliability to drivers and improve their end to end journey experience on the A14 corridor and M6 to support the regional and national economy</p>
	E	<p><b>Support the needs of the freight industry:</b></p> <p>Support the development of more rest facilities and parking particularly on A14 for HGVs by providing additional driver service areas and facilities for HGVs to ensure their safety and support the national economy</p>
	F	<p><b>Reduce the impact of strategic traffic using local roads:</b></p> <p>Reduce the impact of local communities caused by strategic traffic using local roads at junctions</p>
	G	<p><b>Support planned sustainable future housing and business development:</b></p> <p>Support sustainable housing and business development in growth areas such as Kettering, Northampton and Bedford to benefit the regional economy</p>

DfT's strategic objectives for our route

Improving safety for all	Network performance	Improved environmental outcomes	Growing the economy	Managing and planning the SRN for the future	A technology-enabled network
✓					
	✓		✓		
	✓	✓			
	✓				✓
✓			✓		
	✓	✓			
	✓	✓	✓		

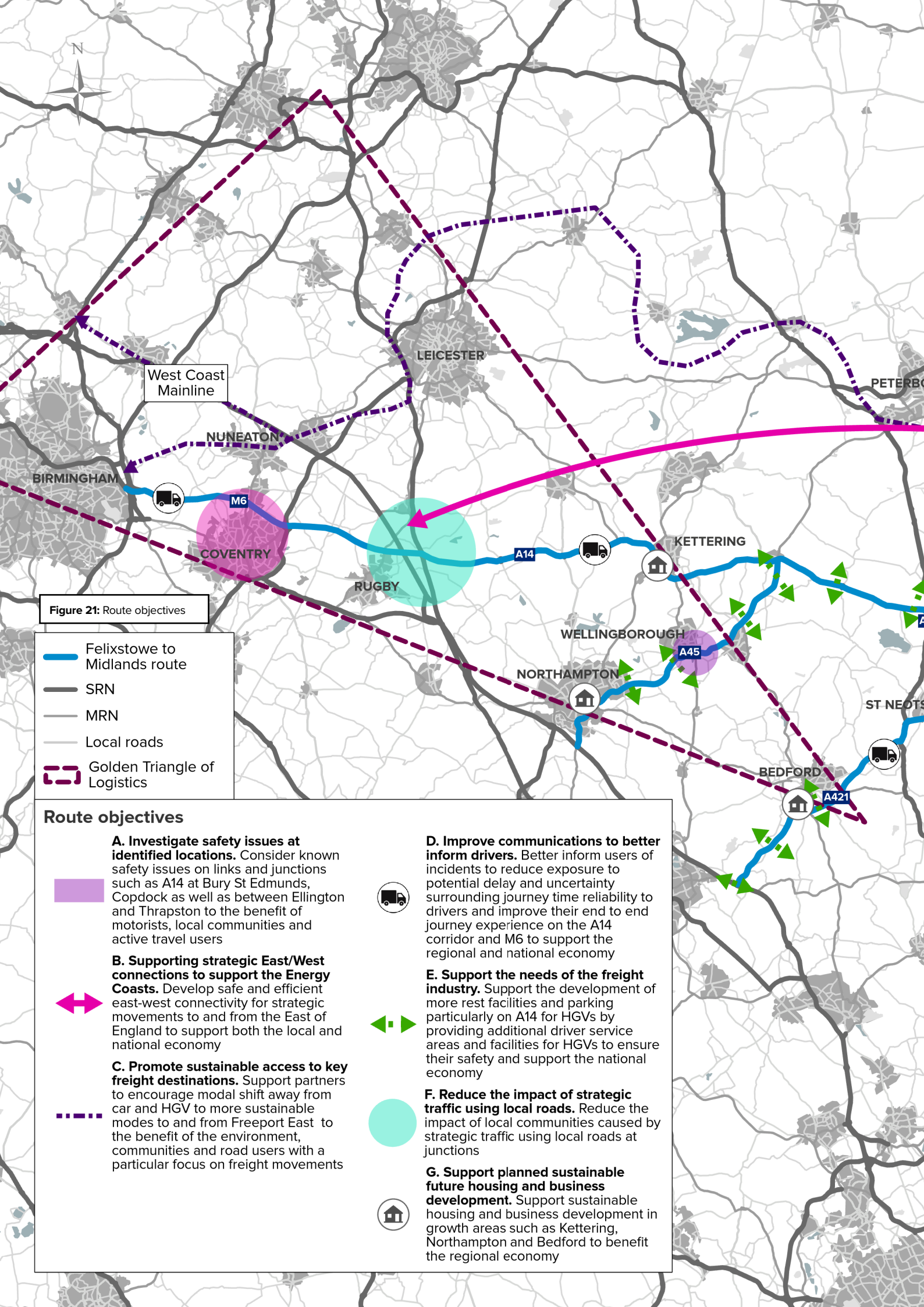









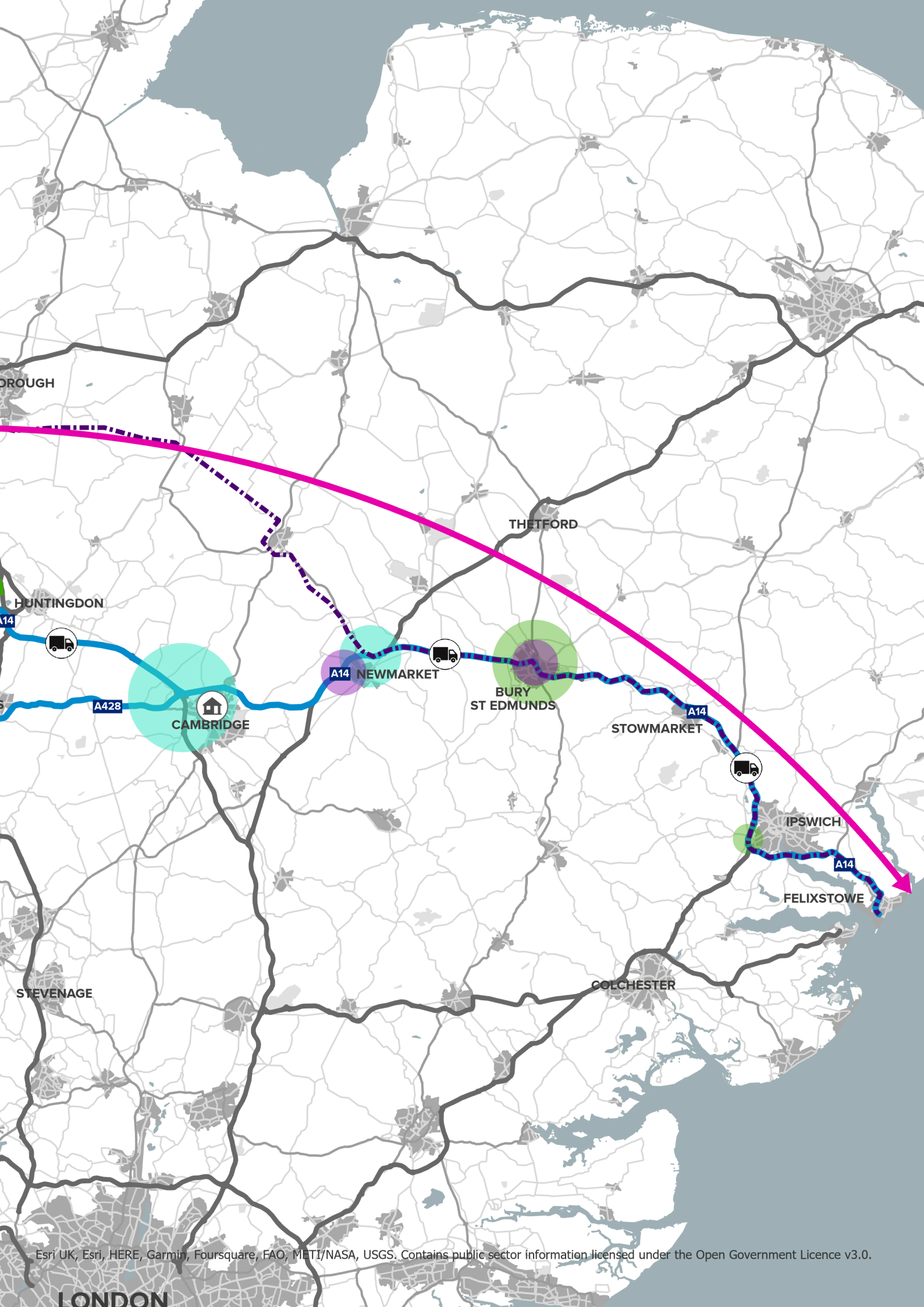


Figure 21: Route objectives

-  Felixstowe to Midlands route
-  SRN
-  MRN
-  Local roads
-  Golden Triangle of Logistics

**Route objectives**

-  **A. Investigate safety issues at identified locations.** Consider known safety issues on links and junctions such as A14 at Bury St Edmunds, Copdock as well as between Ellington and Thrapston to the benefit of motorists, local communities and active travel users
-  **B. Supporting strategic East/West connections to support the Energy Coasts.** Develop safe and efficient east-west connectivity for strategic movements to and from the East of England to support both the local and national economy
-  **C. Promote sustainable access to key freight destinations.** Support partners to encourage modal shift away from car and HGV to more sustainable modes to and from Freeport East to the benefit of the environment, communities and road users with a particular focus on freight movements
-  **D. Improve communications to better inform drivers.** Better inform users of incidents to reduce exposure to potential delay and uncertainty surrounding journey time reliability to drivers and improve their end to end journey experience on the A14 corridor and M6 to support the regional and national economy
-  **E. Support the needs of the freight industry.** Support the development of more rest facilities and parking particularly on A14 for HGVs by providing additional driver service areas and facilities for HGVs to ensure their safety and support the national economy
-  **F. Reduce the impact of strategic traffic using local roads.** Reduce the impact of local communities caused by strategic traffic using local roads at junctions
-  **G. Support planned sustainable future housing and business development.** Support sustainable housing and business development in growth areas such as Kettering, Northampton and Bedford to benefit the regional economy





## A. Investigate safety issues at identified locations

### Objective

Consider known safety issues on links and junctions such as A14 at Bury St Edmunds, Copdock as well as between Ellington and Thrapston to the benefit of motorists, local communities and active travel users

### Context

Sections of the A14, A428, A421 and A45 have a concentration of collisions, especially the remaining single carriageway sections of the A45 and A428. For instance, the A428 between Caxton Gibbet and St Neots only has a 1-star iRAP (International Road Assessment Programme) rating, the lowest scoring. The A45 north of Wellingborough and a section of the A14 between Ellington and Thrapston has a 2-star iRAP rating. This latter section is also where communities alongside the route have noted that there are access and exit issues at the at-grade junctions here.

Evidence shown in Chapter 5 also shows that both the A428 between Caxton Gibbet and St. Neots, and the A45 between Wellingborough and Rushden, are road sections where there is a concentration of collisions between 2015 and 2018. Rushden Lakes is a location identified during engagement with interested parties as having delay issues that cause significant queueing on the mainline, decreasing safety on the route. Queueing on the main line also occurs at the A14/A11 Junction and at Copdock Interchange.

### Our network considerations

Junctions throughout the route are not all of a consistent standard, such as the A14 between Ellington and Thrapston where these are at-grade. There are concentrations of collisions on the A428 at St. Neots, the A421 at Bedford, the A45 at Wellingborough and the M6.

Addressing these safety concerns and concerns raised by interested parties on the A14 between Ellington and Thrapston would benefit local communities. There are also safety issues with the remaining single carriageway sections of the route.

The provision of better walking and cycling infrastructure would reduce the number of collisions involving walkers, cyclists and horse riders, existing local cycle walking infrastructure plans for Northamptonshire linking into the SRN would facilitate improving active travel users.

### Outcomes

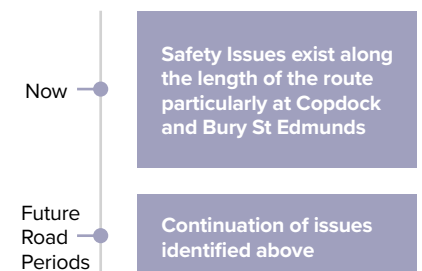
- Improved safety throughout the route for road users
- Reduced number of collisions on the route, including at locations such as Copdock and Bury St Edmunds
- Improved safety conditions for walkers, cyclists and horse riders

### DfT's Strategic objectives



Improving safety for all

### Timeframe based on the issues and constraints identified





## B. Supporting strategic east-west connections

### Objective

Develop safe and efficient east-west connectivity for strategic movements to and from the East of England to support both the local and national economy

### Context

The route includes the A14, which serves as the principal dualled road connecting East Anglia to the Midlands and has been identified as a key transport corridor for inter-city and inter-regional travel. It links the urban centres of Felixstowe, Ipswich, and Cambridge with the Midlands. It supports strategic movements particularly of HGVs. HGVs form an above average percentage of the traffic travelling between Freeport East and the Midlands and beyond (21 to 25%, compared to the East of England average of 11%). The Port of Felixstowe as part of Freeport East is the UK's largest and most active container port on the proposed UKNET strategic network. The port sees nearly 2,000 ships annually through 17 operational shipping lines, making it an important economic site for the corridor.

The 'Golden Triangle of Logistics' is situated within the area covered by the route and will play a key role in road freight movements to and from the ports.

Delays and journey time variability impact negatively on such east-west connectivity that is sought by road users and was raised in engagement.

The A45, A428 and A421 also have a key role for the route. However, they suffer from delays ranging from 13 up to 110 seconds per vehicle mile (seconds pvpm) that affect wider strategic movements for the corridor.

- A428 Caxton Gibbet to St. Neots (26 to 50 seconds pvpm)
- A421 north of Bedford (11 to 25 seconds pvpm)
- A45 Rushden (51 to 154 seconds pvpm), Wellingborough (11 to 25 seconds pvpm) and Northampton (51 to 154 seconds pvpm)

Delays on the A45 can be partly attributed to the single carriageway sections on the route, but there are also locations described above where delay is forecast to increase further by 2031. Unreliable journey times also stem from limited technology on route, meaning disruptive incidents are often handled inefficiently due to poor communication with drivers.

The route connects with the A12 south and the A12 north to coastal developments with the 'Energy Coast' in Suffolk, which services jobs in the growing energy sector through the SZC wind farms and nuclear power.

### Our network considerations

There are capacity constraints causing delays across the route, hindering access to Felixstowe and inland cities. Locations of focus include junctions such as the A11/A14 and A421/A6, M6 Junction 3 and those on the A14 at Bury St Edmunds.

### Outcomes

- Reduced congestion on single carriageway sections of the A45 and A428 and also on the dualled A421
- A supported regional economy through more reliable journey times from minimalised congestion issues across the route

### DfT's Strategic objectives

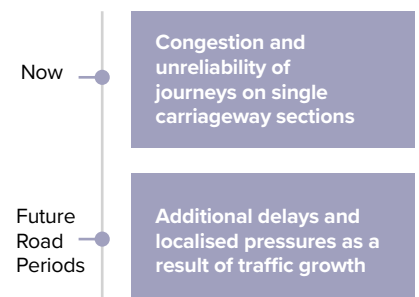


Network performance



Growing the economy

### Timeframe based on the issues and constraints identified





## C. Promote sustainable access to key freight destinations

### Objective

Support modal shift away from car and HGVs to more sustainable modes to and from Freeport East (Felixstowe and Harwich) to the benefit of the environment, communities and road users, with a particular focus on freight movements

### Context

Interested parties said decarbonising transport is essential if the UK is to achieve its net zero carbon ambitions by 2050. Currently, transport accounts for one-third of all greenhouse gas emissions. Interested parties said they supported use of alternative modes and fuels.

Vehicular and rail movements are an important contributor to these emissions, in particular HGVs, which contribute 27% of emissions in Cambridgeshire alone. 50% of freight to the West Midlands and the North filters through the Strategic and Local Road Networks.

The route contains the port of Felixstowe, which is the UK's biggest and busiest container port, making it a key access point for the local economy throughout the route, especially for freight movements.

For rail movement along the corridor, there are considerable rail network constraints with only one east-west rail line between Freeport East and the Midlands, which restricts rail freight growth. An average freight train removes 76 HGVs from the road (source Network Rail).

Congestion also contributes to air pollution, which is found along the route at Cambridge, Bedford, Rugby, and Coventry, correlating with HGV movements along the A14 and M6. Road traffic noise contributes detrimentally to Noise Important Areas on the route, such as those found in Northampton, Bedford, Cambridge and Ipswich.

### Our network considerations

We work with rail partners to improve line capacity and target constraints at Ely and on the North London line to encourage modal shift to address current freight situation with a view to explore alternative options for the future.

Limited line capacity and other constraints exist at Ely and on the North London line, discouraging modal shift to rail freight.

There are receptors within 300m of the route which may be more likely to experience noise impacts in parts of Ipswich, Bury St. Edmunds, Cambridge, Coventry, Northampton and Bedford.

There are receptors within 100m of the route which may be more likely to experience adverse air quality impacts in parts of Felixstowe, Ipswich, Stowmarket, Bury St. Edmunds, Cambridge, Thrapston, Kettering, Coventry, Wellingborough, Northampton, St. Neots and Bedford.

Delays around Ipswich can cause unpredictability for hauliers when accessing the ports of Felixstowe and Harwich.

Limited rail freight facilities with good road access make freight movement less efficient.

There are currently large gaps in the network that are not serviced by electric vehicle chargers or alternate fuels along the A14 corridor. Interested parties have stated that providing more electric vehicle charging points would encourage electric vehicle journeys, reducing emissions.

Explore possibility of coastal shipping from Felixstowe to Hull or Newcastle to reduce HGVs on A14 bound for the North East.

Working with local authorities to improve and promote sustainable travel for workers and commuters accessing the port by promoting the alternative cycle routes.



## Outcomes

- Reduced impact of detrimental air quality and noise nuisance on local communities
- More freight movements moved from road to rail, leading to environmental improvements, fewer delays and greater reliability
- Increased use of low carbon fuels for road transport throughout the route with benefits to the environment through less air pollution
- Reduced freight traffic on the SRN leading to less congested network

## DfT's Strategic objectives

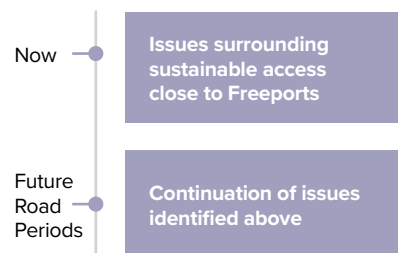


Network performance



Improved environmental outcomes

## Timeframe based on the issues and constraints identified





## D. Improve communications to better inform drivers

### Objective

Better inform users of incidents to reduce exposure to potential delay and uncertainty surrounding journey time reliability to drivers and improve their end to end journey experience on the A14 corridor and M6 to support the regional and national economy

### Context

Technology throughout the SRN in the UK has helped to provide key information to inform decisions about how to improve efficiency of movement. Currently there is very little technology on the A14, with traffic delays being very costly for international freight movement. Due to the sparseness of the route, drivers take a variety of diversions, which are not clearly communicated to the drivers.

Interested parties throughout have stated the importance of better information to forewarn and assist drivers of incidents, with greater incorporation and integration of technology when the SRN filters into the Local Road Network (LRN).

Local communities are affected by congestion and incidents on the SRN. HGVs and other general traffic navigate through local roads to avoid this. The Digital Roads Programme and the use of technology can combine to potentially assist with the issue.

Engagement with road users has suggested that the provision of more EV charging points in existing and additional service areas would improve the relatively poor existing EV infrastructure on the A14 and could also assist in making long distance EV journeys easier and encourage greater take up of such vehicles. Emissions across the route could then be reduced.

### Our network considerations

The Improving technology across the corridor would allow for greater planning and efficient movement for both car and freight movements. Through provision of more technology, it would enable better and more accurate estimations of potential delays following incidents.

Technology could make HGV journeys more efficient through autonomous vehicles connected as part of a platoon.

Wind speed monitoring at Orwell Bridge would also facilitate more efficient movement as closure of this bridge causes significant delays.

### Outcomes

- Improved efficiency of journeys between the key urban centres across the route and beyond
- Wider digital connectivity and integration enabled

- More streamlined traffic movements with reduced transfer between SRN and LRN
- Improved driver experience
- Greater supply of electric vehicle charging points and alternate fuels at rest facilities in more locations, helping to encourage electric vehicle use. Improved overall user journey experience with a decrease in potential collisions

### DfT's Strategic objectives

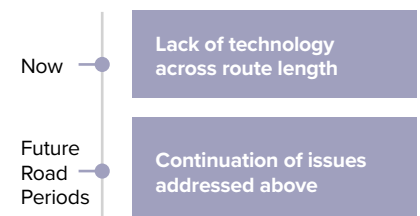


Network performance



A technology-enabled network

### Timeframe based on the issues and constraints identified





## E. Support the needs of the freight industry

### Objective

Support the development of more rest facilities and parking for HGVs, particularly on the A14, by providing additional driver service areas and facilities for HGVs to ensure their safety and support the national economy

### Context

The A14 has much higher than average use by HGVs, with between 21% and 25% of total miles travelled on the road done so by HGVs, compared to the average of 11% for East of England trunk roads. Given this and the importance of the route for international trade at the Port of Felixstowe, lorry rest areas are important both for safety and for economy. The route also bisects the 'Golden Triangle of Logistics' where logistics activity is the most concentrated. Demand for lorry parking in this area is high as it is within reach of an HGV driver's legal driving hours in one day from most areas of the country. It is also within the four and a half hours' driving time from the ports that is allowed without a break.

Currently throughout the route existing provisions for HGV drivers, such as rest and service areas, remain at near full capacity at 97% in the East of England and 87% in the West Midlands.

This insufficient provision compared to the high demand is a long-standing national problem and was frequently raised by interested parties through engagement. This potentially poses a safety issue on the A14 from the greater risk of tiredness and fatigue. Provisions for rest and services are also seen as a key contributor to HGV driver recruitment, which in turn impacts the national economy.

Additionally, an absence of HGV parking provision along the SRN leads to increased parking and movement on local roads. Demand on lay-bys on the A14 between Junction 10 and the M1 and at lorry parks exceeds practical capacity. The closure of the Orwell Crossing lorry park in 2021, one of the closest lorry parks to Felixstowe, has contributed to a shortage of capacity.

### Our network considerations



There is a limited number of rest and service areas across the entire route. There is the potential to utilise 'Park and Ride' sites for HGV overnight parking at high demand locations, such as Cambridge and Ipswich, which would benefit the route greatly and address the wellbeing of drivers.

There are limited HGV parking areas in the Midlands, which poses issues as it is near to the four and a half hours' driving limit from the many of the UK ports including Felixstowe.

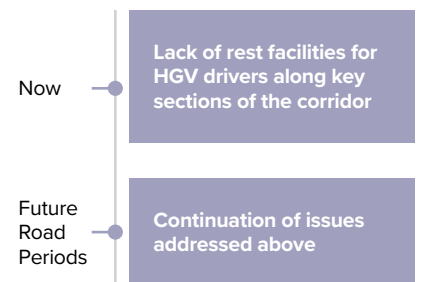
### Outcomes

- Improved safety through an increase in HGV driver wellbeing facilities and beneficial to overall operation of road network
- Increased HGV driver recruitment which boosts the economy

### DfT's Strategic objectives

-  Improving safety for all
-  Growing the economy

### Timeframe based on the issues and constraints identified





## F. Reduce the impact of strategic traffic using local roads

### Objective

Reduce the impacts of local communities caused by strategic traffic using local roads at junctions

### Context

The engagement informed that through traffic should be kept out of local communities and would improve safety, air quality and environment for those affected. Interested parties agree that this is best achieved by ensuring that strategic traffic passing through the area remains on the SRN with minimal need to divert onto the MRN or local roads.

However, there are some junctions on the route with only limited directional movements that can be made. This causes vehicles making prohibited movements to travel through less suitable local roads instead.

There is no direct access to the M1 north at Junction 19 Catthorpe, near Rugby, from the M6 and vice versa. This is a particular issue for surrounding villages near Lutterworth. As a consequence, this impacts the A5/A426 Gibbet Junction where there are delays on the A5 of up to 60 seconds per vehicle per mile in the morning Peak.

Similar limited access junctions that have been discussed during engagement are Girton Interchange, near Cambridge and the A11/A14 Junction.

### Our network considerations

With no direct access to the M1 north from the M6 adjacent to Rugby, traffic resorts to using the A426 as a substitute, compounding congestion and delay issues at Gibbet roundabout at the junction with the A5. This adversely affects the surrounding villages of the A426, with traffic moving into local roads at the junction between the M6 and M1.

Queuing is a particular issue on the A1303 west of Cambridge, and there is lots of traffic passing through the village of Madingley. Some villages in West Suffolk experience rat running due to the limited movements at the A11/A14 Junction.

### Outcomes

- Reduced SRN traffic on less suitable routes and through local villages and towns
- Improved air quality and reduced noise and community severance for local villages and towns
- Reduced delays for strategic traffic, benefiting the regional economy

### DfT's Strategic objectives

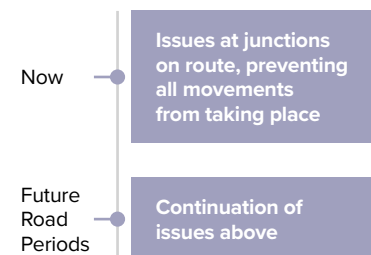


Network performance



Improved environmental outcomes

### Timeframe based on the issues and constraints identified





## G. Support planned sustainable future housing and business development

### Objective

Support sustainable housing and business development in growth areas such as Kettering, Northampton, and Bedford to benefit the regional economy

### Context

The Midlands is the crossroads of the country where delays can have an impact nation-wide. It is the home of the 'Golden Triangle of Logistics' with warehouse hubs in Coventry, Rugby, Northampton, Kettering and Bedford that use HGVs to transport goods around the whole of the country.

Many of the local authorities have ambitious targets for employment and housing growth in their local plans, both to meet government targets and boost the regional economy. Areas such as Kettering, Wellingborough, Bedford and Coventry have areas of higher deprivation, and will potentially benefit from levelling up funding to boost their local economies. But such benefit can only be fully realized if the SRN can accommodate it in the future. This is an issue that has frequently been raised during the course of engagement, especially in regard to locations where existing congestion and planned growth coincide, e.g. Bedford and Northamptonshire.

The strategy for this area of the route therefore needs to recognise increases in demand and changes in the type of demand for housing and business, including the establishment of Sustainable Urban Extensions (SUEs) and expanding Enterprise Zones and Freeports.

Additionally, fully utilising the SRN around key urban centres would make more sustainable mass transit options more feasible. However, currently across the route public transport provision competes poorly against the private car for most key movements.

The route provides the main connection between large urban centres such as Coventry (M6), Birmingham (M6) and Cambridge (A14). These cities are currently relatively poorly connected to each other by public transport. However, the East West rail line has proposed new stations near the A421 in the Bedford area, for instance between Stewartby and Kempston Hardwick, together with St Neots and Camborne on the A428 corridor, which will support local growth.

### Our network considerations

There is considerable business and housing growth planned along our route with locations with significant proposed development in Bedford, Northampton, Cambridge, Rushden, and Kettering.

Bedford Council will also deliver SUEs in the plan period at Wixams, Stewartby and Wooton. The Bedford urban area expects to have 1,900 dwellings delivered by 2030 and key 'service centres' in the borough are to have 2,000 dwellings.

Central Bedfordshire Council will have delivered at least 39,350 new homes and around 24,000 new jobs by 2035. Up to 5,000 of these new homes plus 40 hectares of employment land will be developed at Marston Moretaine situated on the A421 corridor between Bedford and Milton Keynes. Appropriate infrastructure will be necessary to support this level of growth.

The West Northamptonshire joint core strategy stated that 18,870 new homes are to be built within Northampton Borough from 2011 to 2029. There are eight SUEs identified in the Northampton area, as well as an Enterprise Zone that will provide opportunities for new developments and expansion schemes.

Kettering Borough is expected to accommodate significant growth in the period to 2031. The Hanwood Park Sustainable Urban Extension is planned to deliver 5,500 dwellings and associated development by 2031. Smaller SUEs at Desborough and Rothwell, close to the A14, will deliver 700 dwellings each. The overall jobs target for the borough is 8,100 by 2031. Areas such as food production and logistics will be targeted for this employment growth and will require a resilient road structure to achieve this.

The above growth locations have lower than average levels of journey time reliability. This variability and unpredictability across the route could impact on the growth potential of the regional economies. Network resilience is particularly important for freight traffic to the ports.

Delays on the local road network can have an impact on the SRN and vice versa, with conflicts already occurring between traffic transitioning between the two on the A45, A421, and A42.

Junction hopping is a key problem along the route at several junctions, with queuing an issue on the A45 at Northampton. The dualling and re-alignment of the A428 should alleviate delays and help facilitate efficient movement for housing and business growth.

Further opportunities for modal shift as a viable option to reduce highway demand would benefit the route greatly, with an opportunity for supporting planned sustainable growth, in particular in the Tempsford and St. Neots area.

Interested parties have also identified operational issues at the A421/M1 Junction as a potential constraint to future growth in the area.

## Outcomes

- Sustainable growth is supported, with the SRN able to accommodate additional traffic from new homes and employment
- Improved access between the SRN, MRN, and LRN, facilitating the growth of developments along the route
- Improved public transport links provide a viable alternative option to car journeys

## DfT's Strategic objectives



Network performance



Improving environmental outcomes



Growing the economy

## Timeframe based on the issues and constraints identified

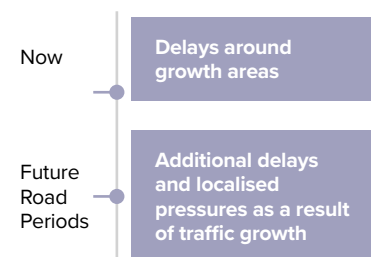




Table 2: Evidence used to inform objectives

Objective	Extent	Chapter 3 Views raised by our customers and neighbours	Chapter 4 Integration with our partners' strategies and priorities	Chapter 5 Challenges and issues identified
<p><b>A Investigate safety issues at identified locations -</b> Consider known safety issues on links and junctions such as A14 at Bury St Edmunds, Copdock as well as between Ellington and Thrapston to the benefit of motorists, local communities and active travel users.</p>	<p>The following sections of the route:</p> <ul style="list-style-type: none"> <li>• Copdock Interchange</li> <li>• Bury St.Edmunds</li> <li>• Ellington to Thrapston</li> <li>• A428 Caxton Gibbet to Eaton Socon</li> <li>• A45 Wellingborough to Thrapston</li> </ul>	<p>Concerns of interested parties related to road safety on:</p> <ul style="list-style-type: none"> <li>• At grade junctions on A14 between Ellington and Thrapston raised by for local residents on safety grounds</li> <li>• Copdock Interchange and A11/A14 congestion and safety issue caused by online queuing</li> <li>• A45 Wilby Way to Great Billing a safety issue</li> <li>• Better provision needed for lorry parking and facilities which can impact safety through fatigue</li> </ul>	<p>England's Economic Heartland priorities identify the need for a safe and inclusive transport system. Transport East vision is for a fast, safe, reliable and resilient network.</p>	<p>Safety and collision issues on</p> <ul style="list-style-type: none"> <li>• A428 between Caxton Gibbet and St. Neots</li> <li>• A421 south of Bedford</li> <li>• At grade junctions on A14 between Ellington and Thrapston</li> </ul>
<p><b>B Supporting strategic East/West connections:</b> Develop safe and efficient east-west connectivity for strategic movements to and from the East of England to support both the local and national economy.</p>	<p>Single Carriageway sections, including:</p> <ul style="list-style-type: none"> <li>• A428 Caxton Gibbet to St.Neots and A45 Chowns Mill to Thrapston.</li> <li>• Also Copdock Interchange is a location where demand can exceed capacity and at junctions on the A14 at Bury St Edmunds and A11/A14 and A421/A6 junctions.</li> </ul>	<p>Concerns of interested parties related to strategic connections:</p> <ul style="list-style-type: none"> <li>• Improve connections to the international gateways of Felixstowe and Harwich</li> <li>• Capacity issues at A11/A14 and Copdock junctions</li> <li>• Need for network improvements between Stanwick and Raunds on A45</li> <li>• A428 Black Cat to Caxton Gibbett is a good opportunity for performance improvement</li> <li>• Single carriageway sections are causing major capacity constraints</li> </ul>	<p>England's Economic Heartland priorities identify the need for supporting the regional economy by connecting people and businesses to markets and opportunities. It also strives to enable the efficient movement of people and goods through the region. Transport East vision is to provide enhanced links between our fastest growing places and business places and better connected ports to help UK businesses thrive boosting the nation's economy. Midlands Connect has a challenge for a stronger Midlands by driving resilient economic growth and to provide fast and reliable transport connections.</p>	<ul style="list-style-type: none"> <li>• Single carriageway sections are experiencing delays, including A428 Caxton Gibbet to St.Neots and the A45 north of Chowns Mill roundabout to the A14 at Thrapston</li> <li>• There are delays on the A45 around Rushden, Wellingborough and Northampton and between Bedford and the Black Cat roundabout</li> </ul>



Objective	Extent	Chapter 3 Views raised by our customers and neighbours	Chapter 4 Integration with our partners' strategies and priorities	Chapter 5 Challenges and issues identified
<p><b>C Promote sustainable access to key freight destinations:</b></p> <p>Support partners to encourage more multi-modal and sustainable journeys to and from Freeport East to the benefit of the environment, communities and road users with a particular focus on freight movements.</p>	<p>Primarily applies to the A14</p>	<p>Concerns of interested parties related to sustainable access:</p> <ul style="list-style-type: none"> <li>• Greater integration with public transport, walking and cycling</li> <li>• Ensure network responds to net zero carbon and environmental ambitions</li> <li>• Consider need for future greener energy provision from EV charging points and green hydrogen production</li> </ul>	<p>England's Economic Heartland has a priority to achieve net-zero carbon emissions from transport no later than 2050 and a vision of supporting sustainable growth and improving the quality of life through a decarbonised transport network.</p> <p>Transport East has one priority of decarbonisation to net zero for transport building on the regions status as the UK's premier renewable energy region. Another priority is a reinvented sustainable coast for the 21st century which powers the UK through energy generation.</p> <p>Midlands Connect has a challenge for a greener Midlands by decarbonising transport and adapting to climate change and minimising the environmental impacts of new infrastructure. This Sub-National Transport body also wants to help to accelerate the use of electric cars and alternatively fuelled vehicles and to futureproof roads against the impacts of climate change.</p> <p>Network Rail strategy includes helping to transfer more journeys onto rail which can help relieve congestion on the strategic road network and improve the environment by increasing the use of more sustainable modes.</p>	<ul style="list-style-type: none"> <li>• Existing higher than average percentage of HGV using the A14 contribute to reduced air quality and increased noise</li> <li>• Insufficient spare capacity on rail network</li> <li>• Greater roll out of EV charging infrastructure required to support EV driving longer distances</li> </ul>

Objective	Extent	Chapter 3 Views raised by our customers and neighbours	Chapter 4 Integration with our partners' strategies and priorities	Chapter 5 Challenges and issues identified
<p><b>D Improve communications to better inform drivers:</b> Better inform users of incidents to reduce delay and uncertainty surrounding journey time reliability to drivers, and improve their end to end journey experience on the A14 corridor and M6 to support the regional and national economy.</p>	<p>The following sections of the route:</p> <ul style="list-style-type: none"> <li>• A14</li> <li>• A45</li> <li>• A428</li> <li>• M6 Coventry Junctions 2 and 3</li> </ul>	<p>Concerns of interested parties related to improved communications:</p> <ul style="list-style-type: none"> <li>• Improve communications with local Highway Authorities regarding information signage</li> <li>• Opportunities to deliver significant improvements in technology now and as part of a new scheme</li> </ul>	<p>England's Economic Heartland wants to harness smart technologies to allow the region to have a competitive edge in global markets.</p> <p>Midlands Connect seeks to maximise technology-related opportunities to improve connectivity.</p>	<ul style="list-style-type: none"> <li>• Limited or no technology on the route with the exception of the M6. This makes it difficult to manage disruptive incidents effectively by forewarning and re-routing drivers</li> <li>• Need to integrate technology better with that provided on the major road network and local road networks</li> </ul>
<p><b>E Support the needs of the freight industry:</b> Support the development of more rest facilities and parking particularly on A14 for HGVs, by providing additional driver service areas and facilities for HGVs to ensure their safety and support the national economy.</p>	<p>The extent of this objective is route wide</p>	<p>Concerns of interested parties related to supporting the needs of the freight industry:</p> <ul style="list-style-type: none"> <li>• Better provision needed for lorry parking and facilities which contributes to driver shortage to the detriment of the national economy</li> </ul>	<p>England's Economic Heartland has a priority to improve quality of life and wellbeing through a safe and inclusive transport system.</p> <p>Midlands Connect has a priority of helping to move goods.</p>	<ul style="list-style-type: none"> <li>• Insufficient rest and service parking areas for HGVs throughout the route leading to a reduction in recruitment which affects the national economy</li> </ul>

Objective	Extent	Chapter 3 Views raised by our customers and neighbours	Chapter 4 Integration with our partners' strategies and priorities	Chapter 5 Challenges and issues identified
<p><b>F</b>    <b>Reduce the impact of strategic traffic using local roads:</b> Reduce the impact on local communities caused by strategic traffic using local roads at junctions.</p>	<p>The following sections of the route:</p> <ul style="list-style-type: none"> <li>• M1/M6 Catthorpe Junction</li> <li>• Girton Interchange, Cambridge</li> <li>• A11/A14 Junction</li> </ul>	<p>Concerns of interested parties related to reducing impacts on strategic traffic on local roads:</p> <ul style="list-style-type: none"> <li>• Poor SRN leading to traffic using inappropriate roads</li> <li>• Ensure strategic traffic passing through the area remains on the SRN with minimal need to divert onto local networks</li> <li>• Absence of a link M6 southbound to M1 northbound at M1 Junction 19 and M1 southbound now contributing to delays at A426/A5 Gibbet roundabout and extra traffic on local roads</li> <li>• Lack of all movements at A11/A14</li> <li>• Girton Interchange – limited access junction causing congestion on local roads</li> </ul>	<p>England's Economic Heartland wishes to enable the efficient movement of people and goods throughout the region in a way which lessens its environmental impact.</p>	<ul style="list-style-type: none"> <li>• Limited access/movement junctions can force traffic to divert off the SRN on to the MRN and local roads causing detrimental impact to communities through delays and negative environmental impact</li> </ul>
<p><b>G</b>    <b>Support planned sustainable future housing and business development:</b> Support sustainable housing and business development in growth areas such as Kettering, Northampton, and Bedford to benefit the regional economy.</p>	<p>The following areas of the route:</p> <ul style="list-style-type: none"> <li>• Kettering</li> <li>• Bedford</li> <li>• Northamptonshire</li> <li>• Cambridge</li> </ul>	<p>Concerns of interested parties related to sustainable growth:</p> <ul style="list-style-type: none"> <li>• Strategic road network needs to be responsive to and to take account of major growth expectations</li> <li>• Where network is close to capacity it is impacting the ability to cater for growth in homes and employment</li> <li>• Accommodating growth on the A45 around Northampton and planned growth in North Northamptonshire along the A14 and A45</li> </ul>	<p>England's Economic Heartland has a framework for enabling green economic growth by supporting sustainable growth.</p> <p>Transport East aims to deliver a fit for purpose sustainable network that will be able to accommodate future growth in the area.</p> <p>Midlands Connect has a challenge to enable population and employment growth.</p>	<ul style="list-style-type: none"> <li>• Significant housing and employment is forecast to be completed by 2031 and where this will occur in areas of the network already close to capacity then the ability to effectively deliver such growth is compromised.</li> <li>• Variability of journey times and lack of network resilience in certain congested areas of the route could impact growth in regional economies and international freight bound for the ports.</li> <li>• Lack of HGV parking and facilities may discourage driver recruitment impacting business development.</li> </ul>



**Unlocking  
regional  
potential**

# 07

## Locational areas for consideration and potential collaboration

We know the importance that investment in our network can make locally, regionally and nationally. It can make areas more attractive for inward investment, unlock new sites for employment and housing and facilitate regeneration. It can also ease congestion, improve our customers' journeys and support environmental improvements.

In this chapter, we outline our proposed locational areas for further consideration, which will be explored in future road periods to achieve the Felixstowe to Midlands route objectives and the Department for Transport's (DfT) six strategic objectives. These do not represent a commitment as funding will be considered as part of the development of the third *Road investment strategy* (RIS) and other investment processes.

Furthermore, these schemes do not represent a final list of our potential investment locations and they will be refined in our final Route Strategy Overview Report, published alongside our RIS3 *Strategic business plan* and *Delivery plan for 2025-2030*.

## Alignment with government objectives

Route strategies are aligned to the DfT's six strategic objectives and will also contribute to the RIS3 performance metrics set as part of the RIS-setting process.



### Improving safety for all

Safety is our top priority and we are committed in the second road period (2020-2025) to reducing the number of road users killed or seriously injured on the strategic road network (SRN), by 50% (from the 2005-2009 baseline) by the end of 2025, with a long-term vision of zero harm. This includes our Contractors adopting a safe system approach to ensure roadworker safety. Our operational and strategic planning teams continue to work to prevent incidents from occurring and are focussed on reducing incident severity through a package of activities to promote safer roads, safer people, safer vehicles and coordinated collision response. We are also learning from other organisations and interested parties about what works best and collaborate with them to improve safety for all. Safety will be embedded in our forward study programme to inform future investment priorities for RIS3 and beyond.



### Network performance

Our operational and strategic planning teams continue to explore what steps can be taken to make journeys more reliable and not subject to delay, as well as safer, while protecting and respecting the environment. This involves working with our partners such as Sub-national Transport Bodies and other operators such as Network Rail to consider interventions to improve network performance as we recognise the SRN does not stand alone from other transport infrastructure, in particular local roads, and users expect journeys to be seamless regardless of transport mode or ownership. Through our study programme we will identify appropriate types of intervention recognising the need for integration, environmental and digital consideration balanced against costs.



### Improved environmental outcomes

We are continuously working to ensure our roads work more harmoniously with the communities that live alongside them and the environments that surround them. We embed environmental considerations into all our activities, ranging from infrastructure design to scheme delivery and ensuring we meet our statutory obligations, and the way we manage and operate our network. In developing our intervention programmes, we will consider a broad range of interventions including technology enabled solutions and integration with other operators' networks as we understand the gravity of the climate situation and are committed to playing our part in reducing carbon emissions. Our carbon policy commitments are:

- As a net zero Britain will still travel by road in 2050, we will ensure a properly maintained, future-ready road network, that is fit to support the transition to electric vehicles, is key to reducing emissions from transport
- This programmatic coordinated delivery approach will act as a catalyst for: production management, off-site construction, reducing network disruptions, unlocking economies of scale, and supporting delivery of net zero targets
- It will also help us understand how interventions should be delivered, either through grouping or as standalone projects
- We expect this approach will create opportunities for increased efficiencies, enabling us to deliver more within our funding. We also expect this approach to help us support The Government's long-term aims for the nation, such as contributing to net zero carbon, and social values



## Growing the economy

We recognise that the SRN is a significant economic asset for the UK and is essential for people to access jobs, and for businesses and logistics firms moving goods around the country. Our regional planning teams continue to work closely with local planning authorities to support sustainable growth and development aspirations, including integration with other modes. We also continue to work with businesses to understand their needs such as quality lorry parking facilities and ensuring reliable and resilient integration with ports, airports and rail terminals through which we access global markets. The SRN also has a role in achieving The Government's moral, social and economic programme of levelling up the United Kingdom. Our forward intervention programme will seek to support the growth agenda where possible and appropriate.



## Managing and planning the SRN for the future

We recognise that our network is complex and varied and requires careful stewardship to keep it in good condition. Our ongoing maintenance programme is essential to safety and keeping our roads open, while our renewals activity allows us to maintain, safeguard and modernise all our assets, and providing resilience in relation to extreme weather. Research and data help us to understand what our network needs over the short and long term and to inform our planning. We continue to be customer focused and maximises value to taxpayers.



## A technology-enabled network

In designing our intervention programmes, we will consider our Digital Roads vision for how we harness data, technology, and connectivity to improve the way the SRN is designed, built, operated and used for the future. This will enable safer journeys, faster delivery and an enhanced customer experience for all. The vision is structured around three themes: Design & Construction, Operations, and Customers. The approach embeds digital, data and technology across the intervention programmes, providing the building blocks for a digital future for roads.

## Programmatic approach to investment

As part of our new route strategies process, we are developing a more programmatic approach to how we develop our investment plans. This will help us determine the complexity of potential investments and which high value interventions are more deliverable.

This programmatic coordinated delivery approach will act as a catalyst for; production management, off-site construction, reducing network disruptions, unlocking economies of scale and supporting delivery of net zero targets.

It will also help us understand how interventions should be delivered, either through grouping or as standalone projects.

We expect this approach will create opportunities for increased efficiency, enable us to deliver more within our funding and in collaboration with other investment programmes.

We also expect this approach to help us support the Government's long-term aims for the UK, such as contributing to net zero carbon.

Figure 22 shows how the route objectives defined in the route strategies, along with the associated cluster analysis of performance metrics, help to refine an initial set of locations for future investigation. Further iterations of sifting as information and analysis evolves will help to inform the Government's setting of RIS3 (2025-2030) and beyond. The input from route strategies early on in this process will ensure that all schemes which are ultimately taken forward align with the route objectives.

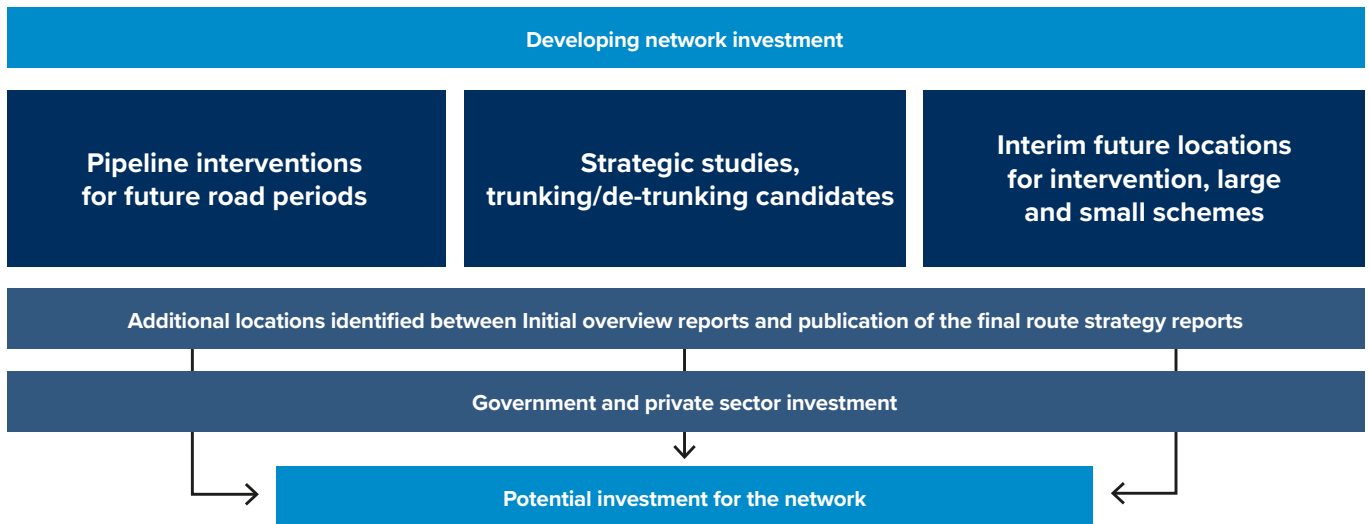


Figure 22: Process to identify potential investment on the network

## Types of investment and funding sources

There are a variety of funding streams which enable us to invest in our network and which form part of our investment planning. These are summarised in the following section, along with the current committed schemes associated with each funding source for the Felixstowe to Midlands route. Key funding sources include:

- RIS Funding – a funding stream administered by National Highways:
  - RIS2 Committed Schemes are committed by DfT to be delivered over the Road Investment Strategy, as outlined in the table below. The statement of funding confirmed that £24 billion will be provided during the second road period (2015-2020) to deliver this work, noting that some RIS2 commitments will continue into the third road period
  - RIS4 (2030-2035) pipeline schemes, previously earmarked for RIS3 (2025-2030), will continue to be developed in line with our statutory processes and considered for inclusion within RIS4. These are potential future schemes originally identified by National Highways and set as part of RIS2 by DfT. These schemes are not currently committed for construction.
- Maintenance within National Highways there is funding set aside for network maintenance and renewing ageing assets across the network, the budget for these is included in the RIS settlement
- Potential targeted funding streams that may be made available to National Highways during the third road period as part of the wider RIS settlement, focused on making improvements that will make the biggest difference and deliver lasting benefits
- Other external sources of funding for delivering infrastructure enhancements on, or close to, the SRN including government, third parties, private sector developments, and inward investment



## RIS2

The following schemes are committed for the second road period (2020-2025) on the Felixstowe to Midlands route:

Scheme number	Scheme	Description	Start of works	Open for traffic
Committed for the second road period (2020-2025)				
1	A428 Black Cat to Caxton Gibbet	The upgrade of the route between the Black Cat roundabout and Caxton Gibbet roundabout with a new 10-mile dual carriageway and a number of junction improvements. The proposed scheme is estimated to cost between £810 to £950 million and, if given the go ahead, will improve journeys between Milton Keynes and Cambridge, bringing communities together and supporting long term growth in the region.	2022-23 Q3 <sup>31</sup>	Road Period 3

## RIS4 pipeline

The following uncommitted schemes are in the pipeline for the fourth road period (2030-2035) on the Felixstowe to Midlands route:

Scheme number	Scheme	Description
1	A12/A14 Copdock Interchange	Proposed improvement of the A14 Junction 55 Copdock Interchange as part of National Highways' continued investment in the East of England.
2	M11 Junction 13 Cambridge West	Addition of north facing slip roads with corresponding junction changes.

## Other Notable Schemes

There are no other committed schemes on the Felixstowe to Midlands route.

<sup>31</sup> Date revised due to planning constraints and stakeholder input

## Strategic studies, trunking and de-trunking

National Highways undertakes Strategic Studies to analyse complex problems that may need to be addressed over multiple road periods. Strategic Studies can involve close working with key partners including Sub-national Transport Bodies and DfT, and can be used to help to decide on whether to fund any proposed improvements in the future.

There are no strategic studies identified on the Felixstowe to Midlands route.

National Highways was asked to explore changes to the SRN to ensure the network aligns with RIS2 strategic priorities reflected in the *Strategic Business Plan*<sup>32</sup>. This plan relates to improving connections between main urban centres, to international gateways, to peripheral regions (for levelling up) and strategic cross-border routes (to strengthen union connectivity). It included a commitment to explore potential asset ownership changes between ourselves and local highway authorities that could be implemented no earlier than the start of RIS3. The DfT has produced a shortlist of 18 trunking and two de-trunking candidates, identified following the draft RIS2 public consultation in 2018, for us to assess desirability and viability of asset transfer. De-trunking is the process of returning a National Highway's road to the local Highway Authority control and vice versa for trunking. These candidates were put forward by a range of external stakeholders including local authorities, Local Enterprise Partnerships and Chambers of Commerce, then shortlisted by the DfT. There is ongoing work to review the assessment evidence and recommendations, after which government ministers are expected to announce the candidates that will progress to the detailed development stage, which will be led by National Highways and incorporated in the forward study programme and wider RIS 3 process.

## Locations identified through route strategies for future investigation

National Highways undertakes route studies to investigate locations across the network. In addition, locations of interest have been raised by Interested Parties through the route strategy engagement process.

To supplement this, as part of the Route Strategies process outlined in this document, National Highways has used cluster analysis to identify further locations for future investigation and undertaken an exercise to align these locations to the route objectives for the Felixstowe to Midlands route.

The cluster analysis allows decision-makers to easily identify which sections of roads should be prioritised for further investigation. The assessment is a two-part process. In the first part, for each route strategy, the objectives are defined geospatially. This allows us to identify over which sections of the SRN the objectives converge, therefore quickly identifying the links that help us to achieve the maximum number of objectives. The second part of the assessment uses our understanding of the network from performance data to allow a further filter to remove links that are already performing well. This results in a filtered shortlist of SRN links or sections of roads that should be prioritised for further investigation. These have been grouped into areas of interest where they are in close proximity geographically. Should a location not be identified for further investigation as part of this initial process, this does not preclude it from being added to the list of areas of interest in the future.

The use of regional traffic models for the 2031 scenario has helped identify locations for further investigation based on the forecast network operation in the future to plan the future of the network beyond the current RIS3 cycle. Typically, this has resulted in the extension of some areas of interest, as shown in the table of locations overleaf. In the final publication version of the Route strategy overview reports, additional data from the regional traffic models will also be considered to enable the identification of locations for further investigation in future roads periods.

Further development of any proposed intervention at each location will follow National Highways' internal processes. In order to fund any proposed improvements, National Highways will draw on the funding streams as previously identified.

<sup>32</sup> <https://nationalhighways.co.uk/strategic-business-plan/>

## Route strategies and regional traffic models

The route strategies have utilised the National Highways regional traffic models (RTMs) to identify future performance and delay on the network, which is the best data currently available. Working with key stakeholders and interested parties, we have set out a number of potential candidate intervention locations which may require further development upon validation to check their alignment with the route strategy objectives.

As we carry out this exercise and as new national traffic growth forecasts are expected to be released by the Department for Transport soon, we will consider, once available, how any updated growth forecasts will impact on the interventions which may come forward to add to a future pipeline of schemes to be delivered through future RIS periods.

New national traffic growth forecasts have now been released by the Department for Transport and as we carry out this exercise, we will consider how updated growth forecasts will impact on the identified areas for further investigation.

The impact on carbon and the environment will be central to all our thinking on which interventions are proposed to be taken forward.

## Identified locations for future investigation and collaboration

Our analysis has set out the potential constraints and opportunities across the network and, in parallel, we are developing a RIS programme that is resilient to changing priorities, the carbon and environment agenda.

We have a wide range of potential intervention types within our toolkit, such as both non-roads and road-based solutions, to help us achieve our objectives. These could include:

### Potential non-road interventions:

- Supporting wider network initiatives to improve the customer experience, such as provision and enhancements of facilities for the freight industry; and EV charging
- Exploiting technology to improve safety and network operation, including roll out of connected corridors
- Delivering a portfolio of measures to encourage active travel
- Making environmental enhancements to minimise the impact of the SRN on surrounding communities
- Encouraging modal integration and influence demand for vehicles, particularly at interfaces with urban centres

### Potential roads interventions:

- In addition to Lower Thames Crossing, we will continue to progress those remaining schemes announced in RIS1 and RIS2<sup>33</sup> that will not be in construction at the end of RP2, as well as the RIS4 pipeline. All these schemes under constant review
- The pipeline schemes announced in RIS2 is the most developed portfolio and we propose a renewed focus to ensure schemes: are resilient with an acceptable Value for Money; consider the Carbon Management in Infrastructure standard; are affordable, with lower cost options being developed; are environmentally responsible; are deliverable; and, have strong stakeholder support and / or are a good strategic fit with other government strategies e.g. ports, levelling up

We will also develop a significant portfolio of smaller safety and congestion interventions that improve localised issues as well as route treatments that address comparably low safety performance (International Road Assessment Programme 1-star and 2-star roads) along selected All Purpose Trunk Road corridors.

<sup>33</sup> Plans for new smart motorways have now been cancelled and previously paused smart motorways will now not go ahead

Table 3 and Figure 23 below show the areas identified for further investigation, where interventions at these locations have the potential to help us achieve the majority of route objectives.

In line with National Highways' internal processes we will draw upon a wide range of funding streams, further developing any proposed intervention to the issues identified, exploring:

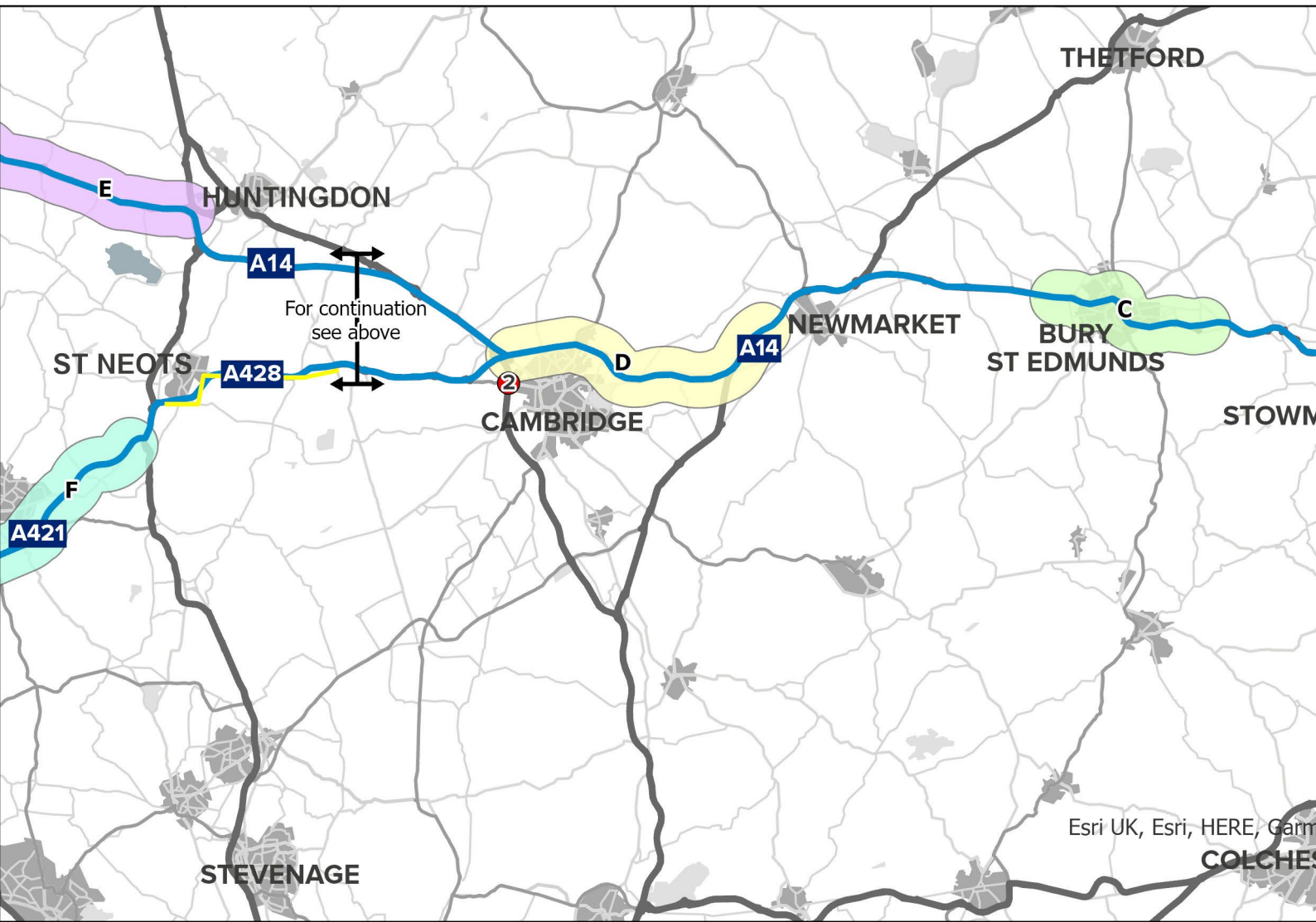
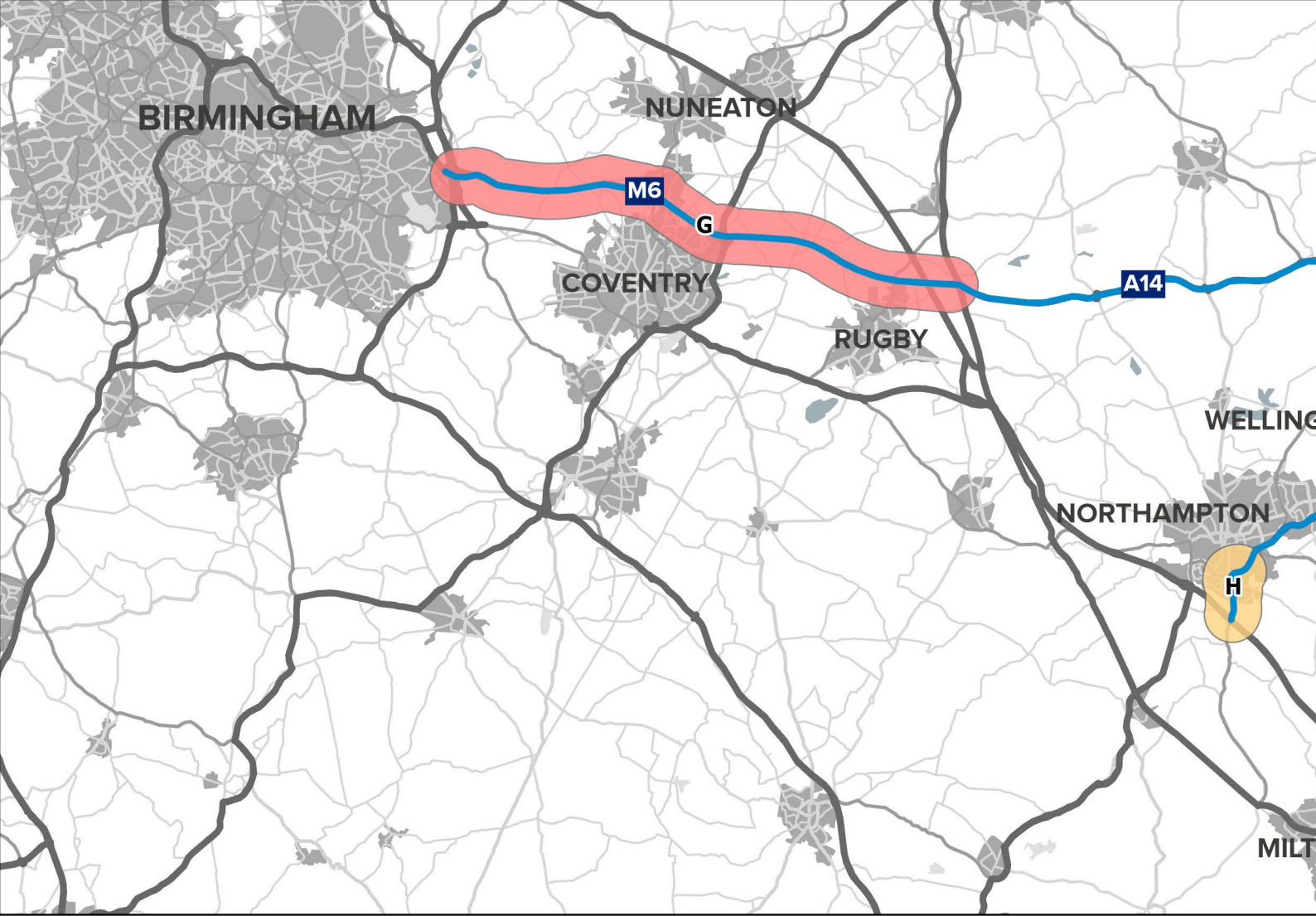
- Collaboration and integration opportunities
- Synergies with existing planned schemes
- Opportunities with asset and maintenance priorities as set out in Chapter 5.5

As part of the ongoing evolution of the Route Strategies toward final publication we will further strengthen its role in being a strategic planning tool for interested parties who have a stake in the SRN and its future.

**Table 3:** Areas of interest for further investigation

Area location	Area of interest	Area issues	Now	Future road periods
<b>A14</b>				
<b>A14 at the port of Felixstowe</b>	<b>A</b>	There are <b>peak hour, average, non-recurrent, seasonal and total delay</b> issues on this section of the A14 within 10 miles of the coast and the Port of Felixstowe. Receptors along the A14, particularly this section, may experience adverse <b>air quality and noise impacts</b> . There is also an <b>elevated incidence of flooding</b> along the route. Issues are compounded by local <b>growth aspirations</b> in the vicinity Felixstowe, a high percentage of <b>HGV traffic</b> and future aspirations for the port.	✓	✓
<b>A14 South and West of Ipswich between Junction 54 and Junction 57</b>	<b>B</b>	Receptors along the A14, particularly this section, may experience adverse <b>air quality and noise impacts</b> . There are also <b>peak hour, average, non-recurrent, seasonal and total delay</b> issues on this section of the A14 around Ipswich. There is an <b>elevated incidence of flooding</b> along the route. The capacity and reliability issues are intensified by <b>local growth plans</b> in and around Ipswich and by the high percentage of <b>HGV traffic</b> on the route.	✓	✓
<b>A14 through Bury St Edmunds</b>	<b>C</b>	There are issues with <b>peak hour, average, non-recurrent, seasonal and total delay</b> on the A14 at Bury St Edmunds. Receptors along the A14, particularly this section, may experience adverse <b>air quality and noise impacts</b> . The issues are elevated by local growth aspirations in Bury St Edmunds and also due to the <b>high proportions of HGVs</b> .	✓	✓
<b>A14 between Newmarket Bypass and Cambridge Airport</b>	<b>D</b>	There are <b>safety concerns</b> , particularly at Junction 35, as well as <b>peak hour, average, non-recurrent, seasonal and total delay</b> concerns around on this stretch of the A14 to the east of Cambridge Airport. This impacts on <b>local communities</b> and exacerbates issues around <b>noise and air quality</b> . Issues are compounded by <b>local growth aspirations</b> in Cambridge and <b>localised flooding</b> on this stretch of the A14 carriageway.	✓	✓
<b>A14 Thrapston to Huntingdon (Junction 13 to Junction 21)</b>	<b>E</b>	There are issues with <b>peak hour, average, non-recurrent, seasonal and total delay</b> on the A14. Receptors along the A14, particularly this section, may experience adverse <b>air quality and noise impacts</b> . The issues are elevated by <b>local growth aspirations and high proportions of HGVs</b> .	✓	✓
<b>A421</b>				
<b>A421 between Great Barford, Bedford and the M1</b>	<b>F</b>	This section of the A421 experiences <b>safety concerns, reliability</b> as well as locations with <b>higher peak hour, seasonal and average delay</b> , particularly around the A421/M1 junction. Receptors along the A421, including Bedford, may also experience adverse impacts on <b>noise and air quality</b> .	✓	✓

Area location	Area of interest	Area issues	Now	Future road periods
<b>M6</b>				
<b>M6 between Rugby and Birmingham</b>	<b>G</b>	is section of the M6 experiences <b>safety concerns, reliability</b> as well as locations with <b>higher peak hour, seasonal and average delay</b> , particularly around Coventry. Receptors along the corridor may also experience adverse impacts on <b>noise and air quality</b> around Rugby and Coventry.	✓	✓
<b>A45</b>				
<b>A45 between M1 and Northampton</b>	<b>H</b>	This section of the A45 experiences issues with <b>collisions, reliability</b> as well as locations with <b>higher peak hour, seasonal and average delay</b> . Receptors along the A45 and Northampton, may also experience adverse impacts on <b>noise and air quality</b> .	✓	✓



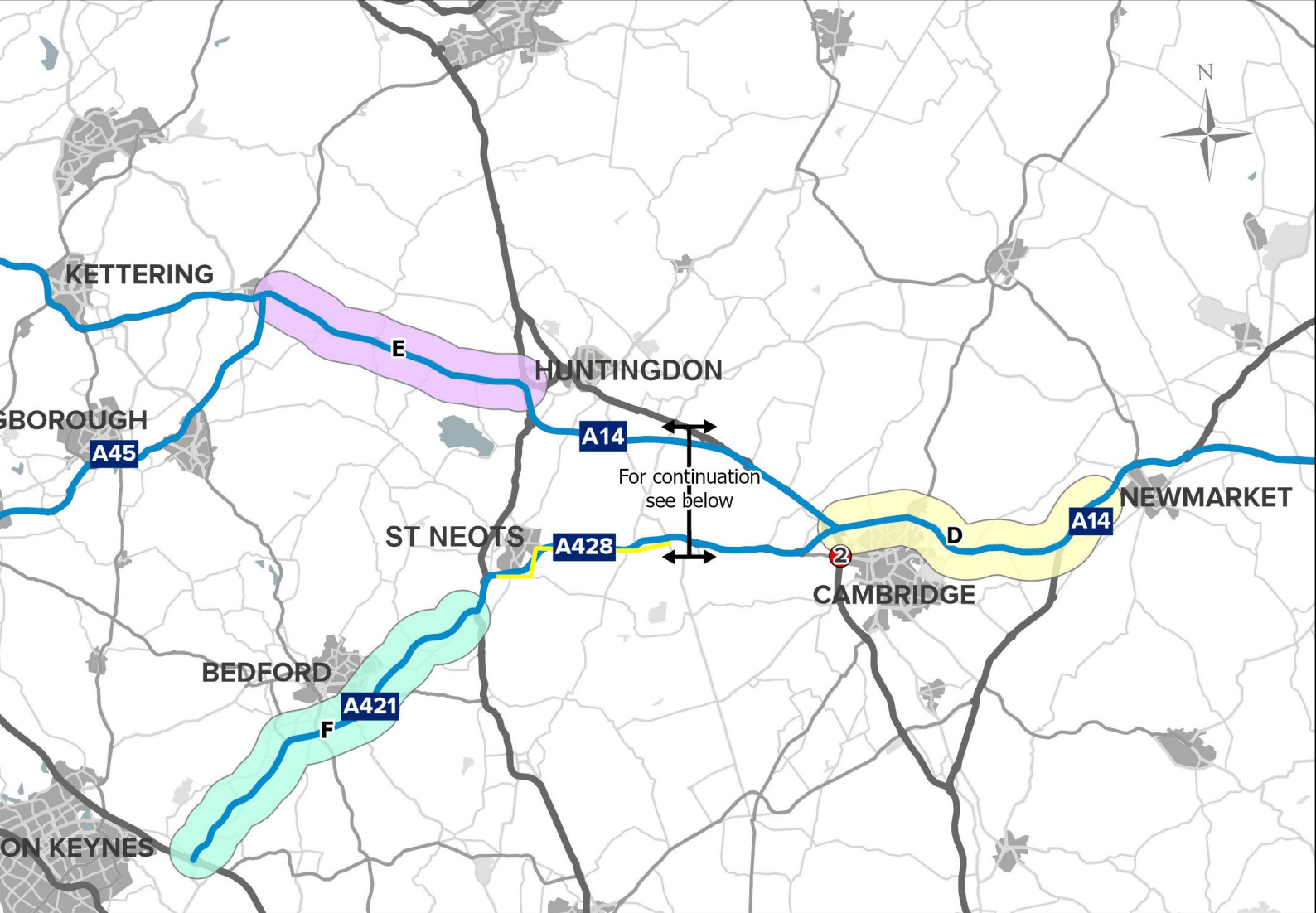
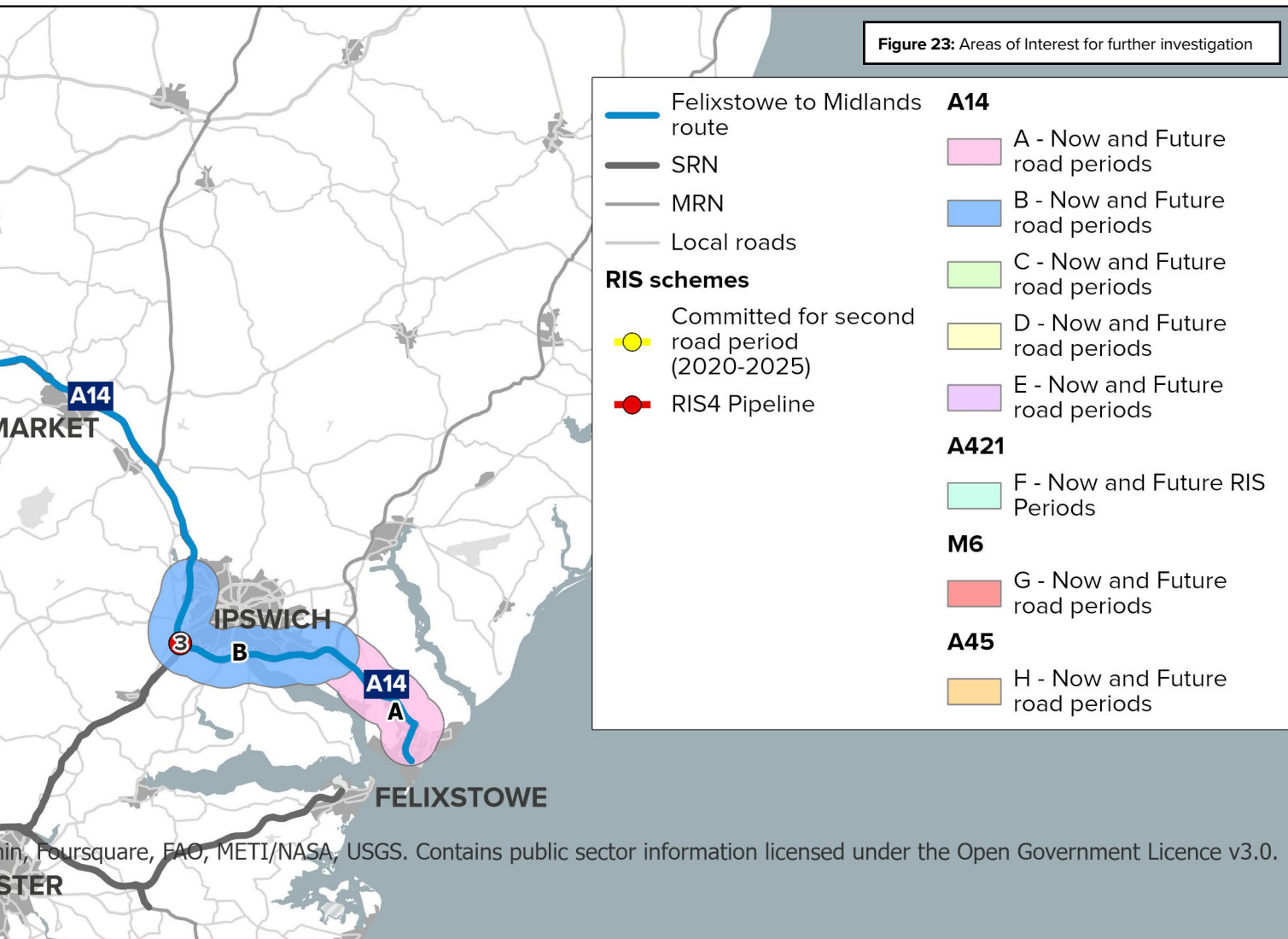


Figure 23: Areas of Interest for further investigation



	Felixstowe to Midlands route	<b>A14</b>	
	SRN		A - Now and Future road periods
	MRN		B - Now and Future road periods
	Local roads		C - Now and Future road periods
<b>RIS schemes</b>			D - Now and Future road periods
	Committed for second road period (2020-2025)		E - Now and Future road periods
	RIS4 Pipeline	<b>A421</b>	
			F - Now and Future RIS Periods
		<b>M6</b>	
			G - Now and Future road periods
		<b>A45</b>	
			H - Now and Future road periods



**What  
happens  
next**



# 08 Next steps

Our route strategies allow informed decisions to be made about our network. They have informed our *Strategic Road Network (SRN) Initial report*, which sets our vision and priorities for the third road period (2025–2030) and beyond (from 2030). They are a forward planning tool for National Highways and our interested parties in their decision making, helping identify locations on our network for further consideration to inform investment opportunities, as well as to support decisions in prioritising potential solutions to enable us to continue to operate and maintain our network.

## Alignment

They also align with the National Highways *Connecting the country: Our long-term strategic plan to 2050*<sup>34</sup> which sets out our 2050 vision for the SRN to be part of a seamlessly integrated transport system that meets our customers' needs by connecting the country safely and reliably, delivering economic prosperity, social value and a thriving environment. *Our long-term strategic plan to 2050* describes the short, medium and long-term steps to 2050 we believe are needed to make our vision a reality over successive road periods and has been informed by extensive horizon scanning, foresight analysis and engagement with key stakeholders across nine focus areas. The route objectives identified in the route strategies, which also respond to the needs of stakeholders, road users and communities, and the locations for further consideration to achieve these objectives are aligned with the 2050 vision.

## Informing the next stage of planning

The route objectives and locations for further consideration will be used to inform our study programmes and consider opportunities for developing integrated and collaborative solutions with our interested parties.

The extensive engagement we have undertaken ensures feedback from our customers and neighbours is used to inform investment decisions. They will help us consider the interaction of our SRN with other transport networks, including the major road network and local roads. We also expect interested parties will use our route strategies to inform their wider investment programmes, supporting collaborative decision making.

For both the Route strategy initial overview reports and *Our long-term strategic plan to 2050*, there will be an opportunity for stakeholders, road users and communities to provide their feedback. This will be alongside DfT's separate consultation on the *SRN initial report* published at the same time.

The 20 finalised Route strategy reports and *Our long-term strategic plan to 2050* will be published by 2025, the end of the current road period (2020-2025), informing the *Strategic business plan* and *Delivery plan*.

## Provide your feedback

To find out more about our route strategies and the development process, please visit our website: [nationalhighways.co.uk/our-roads/our-route-strategies/](https://nationalhighways.co.uk/our-roads/our-route-strategies/)

<sup>34</sup> National Highways (2022) *Connecting the country: Our long-term strategic plan to 2050*.  
<https://nationalhighways.co.uk/connectingthecountry>

# Glossary of terms

Term	Acronym	Description
Active users and active modes of transport		Active users and active modes of transport refers to walkers, cyclists and horse riders.
Air quality management area	AQMA	If a local authority identifies any locations within its boundaries where the Air Quality Objectives are not likely to be achieved, it must declare the area as an Air Quality Management Area (AQMA). The area may encompass just one or two streets, or it could be much bigger. The local authority is subsequently required to put together a plan to improve air quality in that area - a Local Air Quality Action Plan.
Area of Outstanding Natural Beauty	AONB	An area of outstanding natural beauty (AONB) is one of the classes of land protected by the Countryside and Rights of Way Act 2000 (CROW Act). It protects the land to conserve and enhance its natural beauty.
All Lane Running	ALR	All Lane Running (ALR) motorways apply controlled motorway technology, permanently converting the hard shoulder as a running lane, and feature emergency areas.
A-roads		Major roads intended to provide large-scale transport links between regional towns and cities.
Assets		National Highway's assets include our infrastructure such as pavements, structures and tunnels
At-Grade Junction		An at-grade junction is a junction where two or more roads converge, diverge, meet or cross at the same height, as opposed to an interchange, which uses bridges or tunnels to separate different roads.
Clean Air Zone	CAZ	A clean air zone (CAZ) defines an area where targeted action is taken to improve air quality, and resources are prioritised and co-ordinated to deliver improved health benefits and support economic growth.
Collisions		<p>The severity of a collision is based on the severity of the most severely injured casualty and is broken down into:</p> <ul style="list-style-type: none"> <li>• Slight collision: One in which at least one person is slightly injured but no person is killed or seriously injured</li> <li>• Serious collision: One in which at least one person is seriously injured but no person (other than a confirmed suicide) is killed</li> <li>• Fatal collision: A collision in which at least one person is killed</li> </ul>
Department for Transport	DfT	Department for Transport (DfT) plan and invest in transport infrastructure to keep the UK on the move. DfT work with agencies and partners to support the transport network that helps the UK's businesses and gets people and goods travelling around the country.
Design-Build-Finance-Operate arrangements	DBFO	With a design-build-finance-operate arrangement, the private party provides financing and design, then builds and operates the facility. The public partner provides funding while the project is being used or is active.

Term	Acronym	Description
Diversorary Routes		Highways England agreed diversion routes represent the recommended routes for road users when a section of road has been closed.
Dynamic Hard Shoulder	DHS	Dynamic Hard Shoulder Running (DHS) motorways apply the controlled motorway technology and temporarily increase capacity by utilising the hard shoulder, and feature emergency areas. The hard shoulder is some of the time, but not always, used as a live running lane, with electronic signs to guide drivers when it is safe to use for live running.
Economic opportunity areas	EOAs	EOAs were developed to give us a more refined understanding of the types of priority economic growth opportunities that exist around the SRN and around the wider road and broader transport network. They are defined in terms of their common economic function and the spatial features of the location. These key growth areas are grouped by broad 'theme' (such as international gateways, multi-modal transport hubs, tourism destinations and housing locations) and their relative reliance on the SRN.
Freeport		Freeports are special areas within the UK's borders where different economic regulations apply. Freeports in England are centred around one or more air, rail, or seaport, but can extend up to 45km beyond the port(s)
Heavy Goods Vehicle	HGV	A heavy goods vehicle (HGV) is a large vehicle intended for the transportation of heavy loads.
Growth Boards		Growth Boards have been established by some counties as a joined-up way of managing local future growth and supporting economic recovery.
International connectivity		Transport connectivity of the United Kingdom with Europe and the rest of the world.
In-vehicle Technology		This can be in-car systems that typically take the form of a touchscreen or display that is mounted on the dashboard. It can be a collection of hardware and software, which can provide information, data and connectivity to infrastructure to support the customer experience. It can also be the data and technology capability to enable the operation of the car (this might be connected services, autonomous capability, parking sensors, cameras etc.). It can be any technology within a vehicle.
Levelling up		Levelling up is a moral, social and economic programme for the whole of government. It places emphasis on ensuring no community is left behind.
Local Road Network		England's road network consists of motorways, major 'A' roads, and local classified and unclassified roads. The vast majority of motorways and major 'A' roads for the Strategic Road Network (SRN) and are managed by National Highways. All other roads are managed by local authorities and make up the Local Road Network (LRN)
Major Road Network	MRN	The Major Road Network (MRN) is the middle tier of England's road network, comprising the busiest and most economically important local authority A-roads.

# Glossary of terms

Term	Acronym	Description
National Highways Licence		The Licence sets out the Secretary of State's statutory directions and guidance to National Highways.
Noise Action Plans		Noise action plans provide a framework to manage environmental noise and its effects. They also aim to protect quiet areas in agglomerations (large urban areas) where the noise quality is good. Noise Action Plans provide a framework for the local management of the Important Areas.
Noise Important Areas		Noise Important Areas (NIAs) for roads and railways are based upon the strategic noise maps results and are produced in line with the requirements set out in the noise action plans.
Office of Rail and Road	ORR	The Office of Rail and Road (ORR) is the independent safety and economic regulator for Britain's railways and monitor of National Highways
Park and ride		A park and ride offers parking with public transport connections that allows commuters and other people heading to city centres to leave their vehicles and transfer to bus, rail or car share for the remainder of the journey.
Platooning		Heavy Goods Vehicle (HGV) platooning is the use of technology to allow HGVs to travel safely in close proximity at speed with the driver of the lead vehicle controlling the speed, acceleration and braking of the whole 'platoon'.
Receptor (Air quality and Noise)		Location which is sensitive to noise/air quality issues
Regional Traffic Model	RTM	National Highways has a suite of five regional traffic models (RTMs) covering England's SRN. The models allow us to identify future performance and delay on the network, assisting with the development of the route strategies
Reliability		Reliability is the difference between the typical travel time, allowing for recurring delays, and the observed travel time. This measures the amount of variation due to unexpected variations or unplanned events. Like delay, it is measured in seconds per vehicle per mile. It is a concern for most drivers, but particularly affects just-in-time freight traffic and other strategic journeys.
Road investment strategy	RIS	A Road investment strategy (RIS) is a strategy that outlines a long-term programme for National Highways' motorways and major A-roads with the stable funding needed to plan ahead.
Road period		The defined period of time over which The Government gives a funding commitment. The length of a road period will be specified at the beginning of the RIS development process. Road periods will be multi-year in order to provide the supply chain with increased certainty of investment and intent. Based on current practice within the other infrastructure sectors, it is expected that road periods will continue to be five years in length, though the actual length will be decided by the government of the day.
Route objectives		Objectives for each route, informed by engagement and analysis, to support the current and future needs of customers and neighbours.
Safe System approach		<p>The Safe System is the current best practice safety culture in road safety, developed over many years and derived most notably from the Swedish Vision Zero and Dutch Sustainable Safety strategies.</p> <p>A best practice road safety culture approach based on the principles that humans make mistakes which could lead to serious injury or death for which it is a shared responsibility of the road user, road managers, vehicle manufacturers, etc. to take appropriate actions to ensure road collisions do not lead to serious or fatal injuries.</p>

Term	Acronym	Description
Seasonal delay		Seasonal delay refers to the difference between the average afternoon peak delay for Fridays in August 2019 (high demand in summer holidays) and the average delay during very low demand periods (in this case, Christmas day is used). This measure is designed to reflect the parts of the network that do not appear to have a problem on average over the year but have seasonal peaks. Seasonal delay is of interest to tourist traffic, particularly people travelling to airports, or other destinations where arriving later than intended could have significant implications.
Severance		The separation of people from facilities and services they use within their community.
Sites of Special Scientific Interest	SSSIs	A Site of Special Scientific Interest (SSSI) is the land notified as an SSSI under the Wildlife and Countryside Act (1981), as amended. SSSI are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features.
Smart motorway		A smart motorway is a section of motorway that employs active traffic management (ATM) techniques to increase capacity through the use of technology including variable speed limits. There are three types of smart motorway: <ul style="list-style-type: none"> <li>• Controlled Motorway: variable speed limits with the hard shoulder operating as it would on a conventional motorway.</li> <li>• Dynamic Hard Shoulder (DHS) Running: Variable speed limits with the hard shoulder selectively opened as a running lane during periods where traffic levels are too high for only three lanes of running traffic. When activated, vehicles can use the hard shoulder as a running lane.</li> <li>• All Lane Running (ALR): variable speed limits with the hard shoulder removed and converted to a permanent running lane.</li> </ul> Smart motorways have a whole system of inter-related safety features, not present on conventional motorways, working together to help keep drivers and their passengers moving safely. The system includes: <ul style="list-style-type: none"> <li>• Variable speed limits to help keep traffic moving, reducing frustrating stop-start traffic and making journeys quicker</li> <li>• Clearly signed and orange-coloured emergency areas set back from the road and with telephones linking directly to our control rooms</li> <li>• Detection systems to monitor traffic for changes in flows</li> <li>• CCTV cameras that our operators are able to move and zoom to monitor and manage congestion and incidents, where notified. The system has the ability to see 100% of the carriageway</li> <li>• Signs and signals to provide better information to drivers which can alert drivers to hazards ahead and display Red X signs to close lanes to other traffic when a stopped vehicle is identified</li> <li>• Enforcement cameras to deter the minority who break speed limits and ignore Red X signs</li> <li>• Radar stopped vehicle detection</li> </ul>
Spatial planning		Spatial planning decides how land should be used or protected. It also organises, designs and makes decisions on where new homes, roads and other infrastructure should be built. Spatial planning aims to make places attractive, safe and environmentally friendly. National Highways is a statutory consultee in the planning system and we encouraged others to seek early advice from us if their development proposal is likely to impact the strategic road network.
Special Areas of Conservation	SACs	A Special Area of Conservation (SAC) is the land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

# Glossary of terms

Term	Acronym	Description
Statutory consultee		Statutory consultees are those organisations and bodies, defined by statute, which local planning authorities are legally required to consult before reaching a decision on relevant planning applications.
Strategic Rail Freight Interchange		A large multi-purpose rail freight interchange and distribution centre linked into both the rail and road system.
Strategic Road Network	SRN	The strategic road network (SRN) covers over 4,500 miles of motorways and major A-roads.
Strategic Traffic / Strategic journeys		Long distance traffic / journeys
Sub-national Transport Bodies	STBs	Sub-national Transport Bodies (STBs) have a key role in formulating transport strategy and identifying investment priorities at the sub-national level, including for highways. There are 7 STBs in England, who are tasked with developing transport strategies and studies for their region. Through the development of their evidence bases with their constituent local authorities and Local Enterprise Partnerships, their work highlights multi-modal issues, need and opportunities, with investment priorities provided to the Secretary of State for Transport.
Transport-related social exclusion		Where limited access to transport or other issues with the transport system means that people cannot fully participate in society in the way they would like
Trunking / De-trunking		De-trunking is the process of returning a National Highways' road to the local highway authority control and visa versa for trunking
UNESCO World Heritage Site		Inscription as a UNESCO World Heritage Site is an acknowledgement of the global significance of such places.
Union connectivity		Transport connectivity between the nations of the United Kingdom.
Variable Messaging Signs		The Traffic Signs Regulations and General Direction 2016 (TSRGD) define a variable message sign as a device "...capable of displaying, at different times, two or more aspects...". These aspects may take the form of a sign prescribed by the TSRGD, a legend in accordance with Schedule 16 to TSRGD, a non-prescribed temporary sign or a blank grey or blank black face. Thus, the expression "variable message sign" (VMS) encompasses all types of variable sign from simple flap-type signs to complex light-emitting panels.
Vulnerable Road User		Walkers, cyclists and horse riders



↑ Ipswich Docks traffic  
Cliff Quay

Westbank Terminal →



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